knight® "600 SERIES" TUBE CHECKER

ALLIED RADIO CHICAGO

OPERATING INSTRUCTIONS

Plug the line cord into a 117-volt, 50/60-cycle AC outlet. (Export models require 230-volt, 50/60 cycle power.)

Roll the chart to the tube type to be tested. If tube type is not listed on the roll chart look in the Supplementary Tube Chart.

Set controls as shown on chart:

- A-CIRCUIT switch as in column A
- B-FILAMENT switch as in column B
- C-LOAD control as in column C
- TUBE ELEMENTS push up the numbered lever switches listed in column U. Push down the numbered lever switches listed in column D. "0" in these columns stands for lever switch 10. Place all remaining lever switches in the center position.

Turn ON/OFF switch ON.

Insert tube in proper socket.

Let tube warm up for 30 seconds, then set the LINE ADJUST control so the meter needle points to 50.

SHORT TEST

Perform the short test as follows: Push the lever switches that are in the center position up, one at a time. If the SHORT TEST lamp glows steadily when any lever switch is pushed up the tube should be replaced (except those numbers indicated in parenthesis ( ) to the right of the tube type number). A brief flash of the SHORT TEST lamp does not indicate a short. Tap the tube gently while making this test. CAUTION: Do not move the SHORT LINE/VALUE switch while making these short tests.

EMISSION TEST

Hold the SHORT LINE/VALUE switch in the VALUE position. Read the tube condition on the REPLACE-GOOD scale of the meter. If the meter pointer goes to the green section of the scale, cathode emission is acceptable. If the meter pointer is in the red section check the tube chart for special emission notes as: Good=26. If no such notes appear for the tube you are testing, the tube should be replaced.

GAS TEST

Hold the SHORT LINE/VALUE switch in the VALUE position. At the same time pull the lever switch, shown in parenthesis ( ) to the right of column D, down one position. Read the lower GOOD BAD scale on the meter. NOTE: The lever switch indicated for the gas test may initially be up or in the center position; in either case pull this switch down one position only.

MULTI SECTION TUBES

Many tubes incorporate more than one set of electrodes. Such tubes have separate tests, with a separate line on the tube chart, for each tube section. Follow the testing procedure given above for each tube section.

NOTE: It is unnecessary to remove the tube from the socket when resetting the controls for additional section testing.

SPECIAL NOTES ON THE TUBE CHARTS

For testing certain tube types special information is given in addition to the setup columns Numbers appearing in parenthesis ( ) just to the right of the tube type number indicate those lever switches which normally light the SHORT TEST lamp. Another note which frequently appears is the one concerning the emission or value test. Some tubes are good when the pointer reads only 25. This condition will be indicated in the last column on the chart.

Tuning indicator (magic eye) tubes are often tested for eye closure and opening without regard to a meter reading. Thus a good eye tube is indicated by an eye closure when the chart says "eye closed" and an open eye when the chart says "eye open".

Certain tubes have more than one external cap. A note will give special instructions for the test. Usually the note will read "Tie both top caps together". This means a wire jumper should be used to connect the two caps together.

Some tubes call for "Gas Test" under column D. This means: Make your reading on the GAS TEST SCALE as you hold the SHORT LINE/VALUE switch in the VALUE position.

TUBE TEST EXAMPLE #1—TYPE 5GH8

Plug the line cord into an 117-volt, 60 cycle AC outlet.

Turn ON/OFF switch ON.

Adjust roll chart until 5GH8 information appears in the window. This tube has two sections. Check section one first.

TUBE		A	B	C	U	D	
1-5GH8	(5-8)	4	5	52	3-6	4	(3)
2-5GH8	(5-7)	4	5	60	1	4	(9)

Set A-CIRCUIT switch to 4.

Set B-FILAMENT switch to 5.

Set C-LOAD control to 52.

Set lever switches: 3 & 6 up
4 down

Insert the 5GH8 in the 9 and 10-pin miniature socket.

After 30 seconds, set the LINE ADJUST control so the meter needle points to 50.

Short test. Number 5 & 8 appears in parenthesis ( ) next to the tube type. Pushing these lever switches up one at a time produces a glow from the SHORT TEST lamp.

Push switches 1, 2, 7, 9 & 10 up, and then back to the center position, one at a time. If the SHORT TEST lamp does not glow steadily when any of these switches is up there are no abnormal shorts in the tube.

Emission test. Slide the SHORT LINE/VALUE switch to the VALUE position and read the meter. A reading in the upper GOOD area indicates the tube has acceptable cathode emission.

Gas test. Hold the SHORT LINE/VALUE switch in the VALUE position. Pull lever switch 3 (which is now in the upper position) down one position to the center. Read the lower GOOD BAD scale on the meter.

Set the ON/OFF switch to OFF.

Reset all lever switches to the normal center position.

Test the second section by:

Set C-LOAD switch to 60.

Set lever switches: 1 up
4 down
Set ON/OFF switch to ON again.

On the short test 5 & 7 light the SHORT TEST lamp. Switches 2, 3, 6, 8, 9 & 10 are moved up one at a time. If the SHORT TEST lamp lights for any of these the tube is shorted.

Emission is tested as before. Gas test is made by bringing switch 9 down from center to the down position.

TUBE		A	B	C	U	D	
00A	(4)	4	5	56	2	1	
01A	(4)	4	5	65	2	1	
0A2	(2-4-7)	4	Off	48	1-5	Gas Test	
0A3	(3-7)	4	0.63	50	5	Gas Test	
1-0A4	(2-7)	4	Off	40	5		
2-0A4	—	4	Off	40	5-7	Gas Test	
0A5	(1-3)	4	0.63	32	4-7	Gas Test	
0B2	(2-4-7)	4	0.63	50	1-5	Gas Test	
0B3	(3-7)	4	Off	40	5	Gas Test	
0C2	(2-4-7)	4	Off	40	1-5	Gas Test	
0C3	(3-7)	4	0.63	40	5	Gas Test	
0D3	(3-7)	4	Off	30	5	Gas Test	
0E3	(4-8)	4	OFF	50	2	Gas Test	
0G3	(2-4-7)	4	Off	34	1-3-5	Gas Test	
0Y4		4	Off	24	5	3-7-8	
1A3	(1-5)	1	1.4	90	2-6	7	
1A4P	(4)	2	2	68	2-3	1	(3)
1A5	(7)	4	1.4	60	3-4	2	(4)
1-1A6	(6)	4	2	52	2-5	1	(5)
2-1A6	(6)	1	2	48	3-4	1	(4)
1-1A7	(7)	4	1.4	50	3-4-0	2	(4)
2-1A7	(7)	4	1.4	54	4-0	2	
1AB5	(7-8)	4	1.4	70	2-3	1	(3)
1AB6	(7)	4	1.4	54	2-3	1	(3)
1AC6	(7)	1	1.4	38	2-4	1	(4)
1AE4	(1-5)	4	1.4	82	2-3	7	(3)
1AF4	(1-5)	1	1.4	42	2-6	7	(6)
1-1AF5	(7)	4	1.4	90	4-5	1	
						Good=25	
2-1AF5	(7)	4	1.4	34	3	1	
1-1AH5	(7)	4	1.4	30	5-6	1	(6)
2-1AH5	(7)	1	1.4	100	3	1	
1AJ4	(1-5)	2	1.4	50	2-6	7	(6)
1AN5	(1-5)	4	1.4	100	2-3	7	(3)
1AU3	(7-8)	4	1.4	100	0	2	
						Good=20	
1B4P	(4)	4	2	54	2-0	1	(0)
1B4T	(4)	4	2	70	2-3	1	(3)
1-1B5	(6)	2	2	54	2-5	1	(5)
2-1B5	(6)	1	2	100	3	1	
3-1B5	(6)	1	2	100	4	1	
1-1B7	(7)	4	1.4	46	3-4	2	(4)
2-1B7	(7)	2	1.4	50	5-6	2	(5)
1-1C1	(1-5)	4	1.4	50	2-3	7	(3)
2-1C1	(1-5)	4	1.4	50	3	7	
1C2	(7)	1	1.4	38	2-4	1	(4)
1C5	(7)	4	1.4	38	3-4	2	(4)
1-1C6	(6)	4	2	48	5	1	
2-1C6	(6)	4	2	46	2-5	1	(5)
1-1C7	(7)	4	2	48	3-4	2	(4)
2-1C7	(7)	1	2	44	5-6	2	(5)
1C21	(2-7)	4	0.63	56	5		
1D5P	(7)	2	2	54	3-0	2	(0)
1D5T	(7)	4	2	76	3-4	2	(4)
1-1D7	(7)	4	2	62	4	2	
2-1D7	(7)	4	2	58	3-4	2	(4)
1-1D8	(7)	2	1.4	52	3-5	2	(5)
2-1D8	(7)	2	1.4	54	6-0	2	(0)
3-1D8	(7)	1	1.4	96	8	2	
1D13	(1)	1	1.4	90	2-6	7	
1-1DN5	(7)	2	1.4	78	2-6	1	(6)
2-1DN5	(7)	1	1.4	100	4	1	(6)
1E4	(7)	2	1.4	44	3-5	2	(5)
1E5P	(7)	2	2	62	3-0	2	(0)
1-1E7	(7)	4	2	46	3-8	2	(8)
2-1E7	(7)	4	2	46	6-8	2	(8)
1F1	(1-5)	2	1.4	50	2-6	7	(6)
1F2	(1-5)	4	1.4	76	2-3	7	(3)
1F3	(1-5)	4	1.4	76	2-3	7	(3)
1F4	(5)	4	2	50	2-4	1	(4)
1F5	(7)	4	2	54	3-4	2	(4)
1-1F6	(6)	1	2	48	2-0	1	(0)
2-1F6	(6)	1	2	40	4	1	
						Good=10	
3-1F6	(6)	1	2	40	5	1	
						Good=10	
1-1F7	(7)	4	2	80	3-6	2	(6)
2-1F7	(7)	1	2	100	4	2	
						Good=40	
3-1F7	(7)	1	2	100	5	2	
						Good=40	
1-1FD1	(7)	4	1.4	30	5-6	1	(6)
2-1FD1	(7)	1	1.4	100	3	1	
1-1FD9	(7)	4	1.4	30	5-6	1	(6)
2-1FD9	(7)	1	1.4	92	3	1	
1G4	(7)	2	1.4	46	3-5	2	(5)
1G5	(7)	2	2	52	3-5	2	(5)
1-1G6	(7)	2	1.4	46	3-4	2	(4)
2-1G6	(7)	2	1.4	46	5-6	2	(5)
1H2	(2-5-8)	4	1.4	92	0	1-4-6-9	
1H4	(7)	2	2	46	3-5	2	(5)
1-1H5	(7)	1	1.4	40	3-0	2	(0)
2-1H5	(7)	1	1.4	100	5	2	
1-1H6	(7)	2	2	48	3-6	2	(6)
2-1H6	(7)	1	2	78	4	2	
3-1H6	(7)	1	2	78	5	2	
1J5	(7)	4	2	44	3-4	2	(4)
1-1J6	(7)	2	2	46	3-4	2	(4)
2-1J6	(7)	2	2	46	5-6	2	(5)
1L4	(1-5)	4	1.4	76	2-3	7	(3)
1LA4	(8)	2	1.4	52	2-6	1	(6)
1LB4	(8)	4	1.4	42	2-3	1	(3)
1LC5	(5-8)	1	1.4	42	2-6	1	(6)
1-1LC6	(8)	4	1.4	50	2-5	1	(5)
2-1LC6	(8)	2	1.4	74	3-4	1	(4)
1-1LD5	(8)	2	1.4	56	2-6	1	(6)
2-1LD5	(8)	1	1.4	100	4	1	
1LE3	(8)	2	1.4	46	2-6	1	(6)
1LG5	(5-8)	2	1.4	48	2-6	1	(6)
1-1LH4	(8)	1	1.4	44	2-6	1	(6)
2-1LH4	(8)	1	1.4	100	4	1	
1LN5	(5-8)	2	1.4	48	2-6	1	(6)
1N2	(7-8)	4	1.4	70	0	2	
1N5	(7)	1	1.4	42	3-0	2	(0)
1-1N6	(7)	4	1.4	64	3-4	2	(4)
2-1N6	(7)	1	1.4	100	6	2	
1P1	(1-7)	4	1.4	44	2-3	5	(3)
1P5	(7)	2	1.4	54	3-0	2	(0)
1P10	(1-7)	2	1.4	46	2-3-6	5	(3)
1P11	(1-7)	2	1.4	43	2-6	5	(6)
1P13	(1)	1	1.4	90	2-6	7	
1Q5	(7)	2	1.4	44	3-5	2	(5)
1R4	(8)	2	1.4	86	4	1	
1S2	(1-4-6-9)	4	2	66	0	2-5-8	
1S4	(1-5)	1	1.4	70	2-4-6	7	(4)
1-1S5	(7)	4	1.4	30	5-6	1	(6)
2-1S5	(7)	1	1.4	92	3	1	
1-1SB6	(7)	2	1.4	48	3-8	2	(8)
2-1SB6	(7)	1	1.4	100	5	2	
						Good=50	
1T5	(7)	2	1.4	52	3-5	2	(5)
1-1U6	(7)	4	1.4	60	2-5	1	(5)
2-1U6	(7)	1	1.4	50	3-4	1	(4)
1V	(4)	3	6.3	40	2	1	
1W4	(7)	4	1.4	50	2-3	1	(3)
1Z2	(1-3-4-6)	3	1.4	80	0	2-5-7 Gas Test	
2A3	(4)	4	2.5	30	2	1	
2A4	(7)	4	2.5	26	3	2	
2A5	(6)	4	2.5	44	2-3	1	(3)
1-2A6	(6)	2	2.5	42	2-0	1	
2-2A6	(6)	1	2.5	94	3	1	
3-2A6	(6)	1	2.5	94	4	1	
1-2A7	(7)	4	2.5	48	2-3	1	(3)
2-2A7	(7)	1	2.5	40	4-5	1	(5)
2AH2	(3-9)	4	2	88	0	1-2-5-6-7-8	
2AS2		4	2.5	78	0	2-5-6-9	
2B3	(7-8)	4	2	56	0	2	
1-2B6	(5-7)	4	2.5	85	2	1	
2-2B6	(6-7)	2	2.5	48	3-4	1-5	(4)
1-2B7	(7)	4	2.5	70	2-3	1	(3)
2-2B7	(7)	1	2.5	80	4	1	
2B22	(1-3-5-7-8)	3	6.3	32	0	2	

TUBE		A	B	C	U	D	
1-2C21	(6-7)	2	6.3	50	3-0	1	(0)
2-2C21	(2-7)	2	6.3	50	4-5	1	(4)
2C22	(7)	4	6.3	26	0	2	
		Tie Both Top Caps Together					
2C26	(7)	4	6.3	28	0	2	
		Tie Both Top Caps Together					
2C33	(7)	3	2.5	36	0	2	
1-2C34	(7)	4	6.3	64	0	1 Right Top Cap	
2-2C34	(7)	4	6.3	64	0	1 Left Top Cap	
2C42	(3-5-7-8)	4	6.3	26	0	2	
		Tie Top Cap and Middle Ring Together					
2C44	(3-4-7-8)	4	6.3	28	0	2	
		Tie Top Cap and Middle Ring Together					
2C46	(3-5-7-8)	4	6.3	28	0	2	
		Tie Top Cap and Middle Ring Together					
1-2C50	(6-8)	4	12.6	45	2	7	(1)
2-2C50	(3-8)	4	12.6	45	5	7	(4)
1-2C51	(8-9)	4	6.3	64	4	1	(3)
2-2C51	(2-9)	4	6.3	64	6	1	(7)
1-2C52	(6-8)	2	12.6	55	1-2	7	(1)
2-2C52	(3-8)	2	12.6	55	4-5	7	(4)
2C53	(7)	2	6.3	58	5-0	2	(5)
2D21	(4-5-7)	4	6.3	26	6	3	
1-2E5	(6)	4	2.5	50	2-4	1 Eye Closed	
2-2E5	(6)	4	2.5	50	4	1 Eye Open	
2E22	(5)	4	6.3	72	4-0	1	(4)
2E24	(1-4-6)	4	3	36	3-0	2-7	(3)
2E25	(7)	4	6.3	46	4-0	2	(4)
2E26	(1-4-6-7)	4	6.3	34	3-0	2	(3)
2E30	(4-7)	1	6.3	56	5	3	(1)
2EA5	(2-4-7)	4	2	84	5-6	3	(6)
1-2EN5	(4)	2	2	38	2	3	
2-2EN5	(4)	2	2	38	7	3	
2ES5	(1-4-7)	4	2	96	5	3	(2)
2F4	(4)	4	2	70	1-5	3	
2FQ5	(1-4-7)	4	2.5	46	5	3	
2FY5	(1-4-7)	4	2	90	5	3	(2)
2HA5	(2-4-7)	1	2.5	54	5	3	(1)
2V2	(2-4-6-7-8)	4	1.4	100	0	5	
2V3	(7)	4	2.5	84	0	2	
2X2	(4)	4	2.5	56	0	1	
2Z2	(4)	3	2.5	56	2	1	
3A2	(1-4-6-9)	4	3	64	0	2-5-8	
3A4	(1-7)	4	1.4	38	2-3-6	5	(3)
1-3A5	(1-7)	4	1.4	64	2	4	
2-3A5	(1-7)	4	1.4	64	6	4	
1-3A8	(2-7)	1	1.4	42	3-0	1	(0)
2-3A8	(2-7)	1	1.4	44	5-6	1	(5)
3-3A8	(2-7)	1	1.4	78	8	1	

TUBE		A	B	C	U	D	
3AW3	(1-7-8)	4	3	66	0	2	
3B2	(1-3-5-7)	4	3	100	0	2-6-8	
3B4	(4-5)	4	1.4	36	1-7	2-6	(1)
3B5	(2-7)	4	1.4	40	3-4	8	(4)
1-3B7	(1-8)	2	1.4	40	2-3	4	(3)
2-3B7	(1-8)	2	1.4	40	6-7	4	(6)
1-3B22	(4)	3	2.5	30	2	1	
2-3B22	(4)	3	2.5	30	3	1	
3B24	(2-4)	1	2	100	0	1 Good=50	
3B25	(4)	4	2.5	26	0	1	
3B26	(7)	4	2.5	38	0	2	
3B27	(4)	3	2.5	38	0	1	
3B28	(4)	4	4.2	28	0	1	
3B29	(1)	4	2.5	90	0	4	
3BN4	(1-2-4-6-7)	4	3	68	5	3	
3C2	(2-4-6-7-8)	1	1.4	76	0	5 Good=30	
3C4	(1-7)	4	1.4	44	2-3	5	(3)
1-3C6	(1-8)	1	1.4	40	3-4	7	(4)
2-3C6	(1-8)	1	1.4	40	5-6	7	(5)
3C23	(4)	4	4.2	25	0	1	
3C31	(4)	4	3	26	0	1	
3CF6	(4)	4	3	52	5-6	3	(6)
3D6	(1-8)	4	1.4	40	2-3	7	(3)
3DX4	(2-4-6)	4	3	34	1-7	3	
3DZ4	(2-4-6)	1	3	80	1-7	3	
3E6	(1-8)	4	1.4	80	2-3	5	(3)
3FH5	(1-4-7)	4	3	72	5	3	(2)
1-3GS8	(5)	4	3	80	2-3	4	(2)
2-3GS8	(5)	4	3	80	2-8	4	(2)
3LF4	(1-8	4	1.4	42	2-3	7	(3)
3Q4	(1-7)	4	1.4	40	2-4-6	5	(4)
3Q5	(2-7)	4	1.4	44	3-4	8	(4)
3S4	(1-7)	2	1.4	46	2-3-6	5	(3)
3V4	(1-7)	2	1.4	43	2-6	5	(6)
1-4A6	(2-7)	2	2	47	3-4	8	(4)
2-4A6	(2-7)	2	2	47	5-6	8	(5)
1-4AV6	(4)	4	4.2	28	1-7	3	(1)
2-4AV6	(4)	1	4.2	82	5	3	
3-4AV6	(4)	1	4.2	100	6	3	
4BA6	(4)	4	4.2	70	5-6	3	(6)
4BN4	(1-2-4-6-7)	4	4.2	66	5	3	
1-4BS8	(5-8)	2	4.2	36	1-2	4	(2)
2-4BS8	(3-5)	2	4.2	36	6-7	4	(7)
1-4BX8	(5-8)	2	4.2	38	1-2	4	(2)
2-4BX8	(3-5)	2	4.2	38	6-7	4	(7)
1-4BZ8	(5-8)	4	4.2	60	1	4	(2)
2-4BZ8	(3-5)	4	4.2	60	6	4	(7)
4CY5	(2-4-7)	2	4.2	36	1-5	3	(1)

TUBE		A	B	C	U	D	
4DK6	(4)	4	4.2	58	5-6	3	(1)
4GZ5	(2-4-5)	4	4.2	40	6-7	3	(6)
4HA5	(2-4-7)	4	4.2	51	5	3	(1)
4HT6	(1-3-5)	4	4.2	44	7-8	4	(2)
4X150A	(2-4-6-7-8)	4	6.3	30	1-5-0	3	
5A/170K	(1-3-5)	4	6.3	40	7-9	4	(9)
5A6	(3-4-5-8)	4	2.5	36	1-6	9	(6)
1-5AQ4	(8)	3	6.3	30	4	2	
2-5AQ4	(8)	3	6.3	30	6	2	
1-5AS8	(5-8)	4	5	52	1-7	4	(1)
2-5AS8	(3-5)	4	5	26	6	4	
1-5AW4	(8)	3	5	34	4	2	
2-5AW4	(8)	3	5	34	6	2	
1-5AX4	(8)	3	5	54	4	2	
2-5AX4	(8)	3	5	54	6	2	
1-5AZ4	(8)	3	5	58	4	2	
2-5AZ4	(8)	3	5	58	6	2	
1-5BC3	(3-8-9)	3	5	40	5-6	1	
2-5BC3	(3-5-9)	3	5	40	8-9	1	
1-5BC8	(5-8)	4	5	66	1	4	(2)
2-5BC8	(3-5)	4	5	66	6	4	(7)
1-5BZ7	(5-8)	4	5	55	1	4	(2)
2-5BZ7	(3-5)	4	5	55	6	4	(7)
1-5CL8	(5-8)	4	5	58	2	4	(1)
2-5CL8	(3-5)	4	5	50	6-7	4	(7)
1-5EG8	(5-6)	4	5	52	1-9	4	(9)
2-5EG8	(5-8)	2	5	36	2-3	4	(2)
1-5KD8	(5-7)	4	5	48	1	4	(9)
2-5KD8	(5-8)	4	5	56	3-6	4	(2)
1-5R4	(8)	3	5	42	4	2	
2-5R4	(8)	3	5	42	6	2	
1-5T4	(8)	3	5	34	4	2	
2-5T4	(8)	3	5	34	6	2	
1-5V4	(8)	3	5	30	4	2	
2-5V4	(8)	3	5	30	6	2	
5V6	(7)	4	5	42	3-4	2	(4)
1-5W4	(8)	3	5	58	4	2	
2-5W4	(8)	3	5	58	6	2	
1-5X3	(4)	3	5	54	2	1	
2-5X3	(4)	3	5	54	3	1	
1-5X4	(8)	3	5	40	3	7	
2-5X4	(8)	3	5	40	5	7	
1-5Y4	(8)	3	5	52	3	7	
2-5Y4	(8)	3	5	52	5	7	
1-5Z3	(4)	3	5	34	2	1	
2-5Z3	(4)	3	5	34	3	1	
1-5Z4	(8)	3	5	34	4	2	
2-5Z4	(8)	3	5	34	6	2	
6A3	(4)	4	6.3	30	2	1	
6A4	(5)	4	6.3	40	2-4	1	(4)
6A5	(2-7)	4	3	30	3	8	
1-6A6	(7)	2	6.3	48	2-3	1	(3)
2-6A6	(7)	2	6.3	48	5-6	1	(5)

TUBE		A	B	C	U	D	
1-6AB5	(6)	4	6.3	24	2-4	1 Eye Closed	
2-6AB5	(6)	4	6.3	24	4	1 Eye Open	
6AB7	(7)	4	6.3	74	6-8	2	(6)
1-6AB8	(5)	4	6.3	50	6-8	4	(8)
2-6AB8	(5)	2	6.3	45	1-2	4	(2)
1-6A7	(7)	4	6.3	48	2-3	1	(3)
2-6A7	(7)	1	6.3	48	4-5	1	(5)
1-6A8	(7)	4	6.3	50	1-3-4-0	2	
2-6A8	(7)	1	6.3	50	5-6	2	(5)
1-6AC6	(7)	2	6.3	75	3	2-8	
2-6AC6	(7)	1	6.3	100	4	2-8	(5)
1-6AD6	(7)	4	6.3	0	5	2 Eyes Open	
2-6AD6	(7)	4	6.3	0	3-4-5	2 Eyes Closed	
1-6AD7	(7)	4	6.3	46	3-4	2	(4)
2-6AD7	(7)	1	6.3	70	1-6	2-8	(1)
6AE5	(7)	2	6.3	46	3-5	2	(5)
1-6AE6	(7)	2	6.3	53	3-5	2	(5)
2-6AE6	(7)	2	6.3	53	4-5	2	(5)
1-6AE7	(7-8)	2	6.3	48	3-4	2	(4)
2-6AE7	(5-7)	2	6.3	48	3-6	2	(6)
6AF5	(7)	4	6.3	44	3	2	
1-6AF6	(7)	4	6.3	0	3-4-5	2 Eyes Closed	
2-6AF6	(7)	4	6.3	0	4-5	2 Right Eye Open	
3-6AF6	(7)	4	6.3	0	3-5	2 Left Eye Open	
6AG6	(7)	4	6.3	34	3-4	2	(4)
1-6AG11	(1-4-9)	3	6.3	32	3	—	
2-6AG11	(2-4-9)	3	6.3	32	0	—	
3-6AG11	(1-2-9)	4	6.3	66	6	—	(8)
4-6AG11	(1-2-4)	4	6.3	66	7	—	(8)
6AJ4	(1-3-4-6-8-9)	4	6.3	56	5	7	
6AJ5	(2-4-7)	2	6.3	42	1-5	3	(1)
6AJ6	(7)	4	6.3	40	3-4	2	(4)
6AJ7	(7)	4	6.3	56	6-8	2	(6)
1-6AJ8	(5)	4	6.3	66	1-6	4	(1)
2-6AJ8	(5)	2	6.3	44	8-9	4	(9)
6AK6	(4)	4	6.3	50	5-6	3	(6)
6AK7	(7)	4	6.3	40	6-8	2	(6)
1-6AK8	(3-5)	1	6.3	42	1	4	
2-6AK8	(5-7)	1	6.3	42	2	4	
3-6AK8	(3-5)	2	6.3	46	8-9	4	(8)
4-6AK8	(3-5)	1	6.3	64	6	4-7	
1-6AL7	(7)	4	6.3	0	3	2-8 Eye Closed	
2-6AL7	(7)	4	6.3	0	3	2-4-8 Right Eye Open	
3-6AL7	(7)	4	6.3	0	3	2-6-8 Left Eye Open	
4-6AL7	(7)	4	6.3	40	1-3	2	(1)
6AM5	(4)	4	6.3	48	5-7	3	(7)
6AM6	(4)	4	6.3	90	5-7	3	(7)
6AN4	(4)	1	6.3	42	1-2-6-7	3	
6AN5	(2-4-7)	4	6.3	32	5-6	3	(6)
6AQ4	(1-2-4-5-6)	4	6.3	80	7	3	
6AR6	(8)	4	6.3	34	3-5	6	(5)
1-6AR8	(5)	4	6.3	82	3-9	4	(3)
2-6AR8	(5)	4	6.3	82	3-8	4	(3)
6AS6	(4)	4	6.3	58	5-6	3	(6)
1-6AS7	(6-8)	4	6.3	28	2	7	
2-6AS7	(3-8)	4	6.3	28	5	7	
1-6AS11	(5-7)	4	6.3	34	2-0	—	(0)
2-6AS11	(5-9)	2	6.3	40	3-4	—	(3)
3-6AS11	(7-9)	2	6.3	36	6-8	—	(6)
1-6AU7	(4-5-8)	4	3	70	1	9	
2-6AU7	(3-4-5)	4	3	70	6	9	
1-6AV11	(4-6)	4	6.3	71	2	—	(1)
2-6AV11	(3-4)	4	6.3	71	5	—	(7)
3-6AV11	(3-6)	4	6.3	71	0	—	(9)
1-6AX6	(7-8)	3	6.3	28	3	2	
2-6AX6	(4-7)	3	6.3	28	5	2	
1-6AX7	(4-5-8)	2	3	40	1-2	9	(2)
2-6AX7	(3-4-5)	2	3	40	6-7	9	(7)
1-6AX8	(5-8)	4	6.3	46	3-6	4	(3)
2-6AX8	(5-7)	4	6.3	58	1	4	(9)
6B4	(7)	4	6.3	30	3	2	
1-6B6	(7)	2	6.3	50	3-0	2	(0)
2-6B6	(7)	2	6.3	72	4	2-8	
3-6B6	(7)	2	6.3	72	4	2-8	
1-6B7	(7)	4	6.3	70	2-3	1	(3)
2-6B7	(7)	1	6.3	68	4	1-6	
3-6B7	(7)	1	6.3	68	5	1-6	
1-6B8	(7)	1	6.3	50	5	2-8 Good=40	
2-6B8	(7)	1	6.3	50	4	2-8 Good=40	
3-6B8	(7)	4	6.3	84	3-6	2	(6)
1-6BC7	(5-7-9)	1	6.3	40	2	4	
2-6BC7	(1-5-9)	1	6.3	40	6	4	
3-6BC7	(1-5-7)	1	6.3	40	8	4	
6BD4	(7)	2	6.3	90	5-0	2	(5)
6BD5	(7)	4	6.3	36	5-8	2	(8)
1-6BD7	(5-7-9)	2	6.3	45	1-2	4	(2)
2-6BD7	(5-7-9)	1	6.3	66	6	3-4	
3-6BD7	(5-7-9)	1	6.3	100	8	3-4	
1-6BE7	(3-5-8)	4	6.3	64	1-6	4	(1)
2-6BE7	(3-5-8)	4	6.3	66	1	4	(7)
1-6BF8	(5)	1	6.3	45	1	4	
2-6BF8	(5)	1	6.3	45	2	4	
3-6BF8	(5)	1	6.3	45	3	4	
4-6BF8	(5)	1	6.3	45	7	4	
5-6BF8	(5)	1	6.3	45	8	4	
6-6BF8	(5)	1	6.3	45	9	4	
6BL4	(8)	3	6.3	26	5	7	
6BN5	(1-2-5-6-8)	4	6.3	48	7-9	4	(9)
1-6BR5	(3-4-8-9)	1	6.3	50	1-7	5	(1)
2-6BR5	(4)	4	6.3	0	3-7-8-9	5 Eye Open	
3-6BR5	(4)	4	6.3	0	3-8-9	5 Eye Closed	
6BS3	(5)	3	6.3	30	2-7	4	
1-6BV8	(5-7-8)	4	6.3	62	3	4	(2)
2-6BV8	(1-5-7)	1	6.3	42	6	4	
3-6BV8	(1-5-8)	1	6.3	42	9	4	
6BX6	(1-3-5)	4	6.3	50	7-8	4	(8)
6BY7	(1-3-5)	4	6.3	46	7-8	4	(8)
6C6	(6)	4	6.3	90	2-3	1	(3)
1-6C7	(7)	4	6.3	100	2	1	(0)
2-6C7	(7)	1	6.3	60	4	1-6	
3-6C7	(7)	1	6.3	60	5	1-6	
1-6C8	(7-8)	2	6.3	54	3-0	2	(0)
2-6C8	(4-7)	2	6.3	50	5-6	2	(5)
1-6C10	(4-6)	2	6.3	44	1-2		(1)
2-6C10	(3-4)	2	6.3	44	5-7		(7)
3-6C10	(3-6)	2	6.3	44	9-0		(9)
1-6CD7	(7)	4	6.3	0	3-5-6	2 Eyes Closed	
2-6CD7	(7)	4	6.3	0	5-6	2 Left Eye Open	
3-6CD7	(7)	4	6.3	0	3-5	2 Right Eye Open	
6CH6	(5)	4	6.3	42	7-8	4	(8)
6CJ6	(1-5-6-9)	4	6.3	30	7-8-0	4	
6CK6	(5)	4	6.3	42	1-7	4	(1)
6CL5	(1-3-6-7-8)	4	6.3	24	4-5-0	2	
6CM5	(1-3-4-7-8)	4	6.3	26	5-0	2	(5)
6CN6	(7)	4	6.3	34	4-0	2	(4)
6CQ6	(4)	4	6.3	100	5-7	3	(7)
1-6CR6	(4)	1	6.3	90	2	3	
2-6CR6	(4)	4	6.3	56	5-6	3	(6)
1-6CW7	(5-7-8)	4	6.3	50	3	4	(2)
2-6CW7	(1-5-7)	4	6.3	50	9	4	(6)
6D1	(1-2-5)	4	6.3	30	7-8-9	4	(9)
1-6D2	(1-4)	1	6.3	40	2	3	
2-6D2	(4-5)	1	6.3	40	7	3	
6D4	(4)	4	6.3	26	7	3	
6D5	(7)	2	6.3	52	3-5	2	(5)
6D6	(6)	4	6.3	60	2-3	1	(3)
6D7	(7)	4	6.3	90	2-3	1	(3)
1-6D8	(7)	4	6.3	52	3-4	2	(4)
2-6D8	(7)	2	6.3	55	5-6	2	(5)
1-6D10	(4-6)	2	6.3	38	1-2		(1)
2-6D10	(3-4)	2	6.3	38	5-7		(7)
3-6D10	(3-6)	2	6.3	38	9-0		(9)
6DA5	(3-5-8-9)	2	6.3	70	1-6	4	(1)
6DA6	(1-5-6)	4	6.3	48	7-8	4	(8)
6DB6	(4)	1	6.3	40	1-5	3	(1)

TUBE		A	B	C	U	D	
1-6DC8	(5)	4	6.3	56	1-6	4	(1)
2-6DC8	(5)	1	6.3	100	7	4	
3-6DC8	(5)	1	6.3	100	8	4	
1-6DJ8	(5-8)	4	6.3	40	1	4	(2)
2-6DJ8	(3-5)	4	6.3	40	6	4	(7)
6DL5	(1-4-7)	4	6.3	44	5-6	3	(6)
6DM4	(8)	4	6.3	25	5	7	
6DN6	(7)	4	6.3	28	8-0	2	(8)
6DR4	(4)	2	6.3	46	1-5-6	3	(6)
1-6DR8	(5)	4	6.3	24	2-6	4	(2)
2-6DR8	(5)	1	6.3	74	8	3-4	
3-6DR8	(5)	1	6.3	56	7	3-4	
1-6DS8	(5)	4	6.3	48	1-6	4	(1)
2-6DS8	(5)	4	6.3	60	8	4	
6DX4	(2-4-6)	4	6.3	37	1-7	3	
6DY6	(5)	2	6.3	92	7-9	4	(2)
1-6DZ8	(5-8)	4	6.3	32	6-7	4	(7)
2-6DZ8	(2-5)	2	6.3	80	1-9	4	(1)
1-6E5	(6)	4	6.3	30	2-4	1 Eye Closed	
2-6E5	(6)	4	6.3	30	4	1 Eye Open	
1-6E6	(7)	4	6.3	50	2	1	
2-6E6	(7)	4	6.3	50	6	1	
6E7	(7)	4	6.3	58	2-3	1	(3)
6EA5	(2-4-7)	4	6.3	66	5-6	3	(6)
1-6EB5	(1-4)	2	6.3	64	2	3	
2-6EB5	(4-5)	2	6.3	64	7	3	
6ET6	(4)	2	6.3	65	5-6	3	(6)
1-6EZ8	(1-5)	4	6.3	92	3	4	(2)
2-6EZ8	(1-5)	4	6.3	36	6	4	(7)
3-6EZ8	(1-5)	4	6.3	36	8	4	(9)
6F5	(7)	2	6.3	40	4-0	2	(0)
6F6	(7)	4	6.3	46	3-4	2	(4)
1-6F7	(7)	2	6.3	78	2-0	1	(0)
2-6F7	(7)	1	6.3	90	4-5	1	(5)
1-6F8	(7-8)	4	6.3	72	3	2	(0)
2-6F8	(4-7)	4	6.3	72	6	2	(5)
6F12	(4)	4	6.3	90	5-7	3	(7)
6F19	(1-3-5)	4	6.3	46	7-8	4	(8)
6F21	(4)	4	6.3	100	5-7	3	(7)
1-6FA7	(5)	4	6.3	90	1-8	4	(8)
2-6FA7	(5)	4	6.3	90	8-9	4	(8)
3-6FA7	(5)	1	6.3	80	3	4-6	
6FD6	(4)	2	6.3	40	1-5	3	(1)
6FE5	(7)	4	6.3	30	3-4	2	(4)
1-6FG6	(2-5-6-8)	2	6.3	70	1-9	4	(1)
2-6FG6	(5)	4	6.3	0	2-6-7-8-9	4 Eye Closed	
3-6FG6	(5)	4	6.3	0	2-6-7-8-9	4	
	Eye opens as Selector Switch 7 is pulled down.						
6FW5	(7)	2	6.3	75	5-8	2	(1)

TUBE		A	B	C	U	D	
1-6FW8	(5-8)	4	6.3	48	1	4	(2)
2-6FW8	(3-5)	4	6.3	40	6	4	(7)
1-6G5	(6)	4	6.3	50	2-4	1 Eye Closed	
2-6G5	(6)	4	6.3	50	4	1 Eye Open	
6G6	(7)	4	6.3	50	3-4	2	(4)
1-6GA7	(8)	2	6.3	78	2-3-7	—	(4)
2-6GA7	(2-3-5)	1	6.3	44	1	—	—
6GB5	(1-2-3-5-8)	4	6.3	28	6-7-0	4	
6GC5	(3-5-6)	4	6.3	30	1-8-9	4	
1-6GE8	(5-7)	4	6.3	30	6	4	
2-6GE8	(2-5)	4	6.3	82	1-9	4	(1)
6GF5	(1-3-4-0)	4	6.3	30	2-7	—	
6GK7	(1-3-5)	4	6.3	70	7-8-9	4	(2)
1-6GM8	(3-5)	2	6.3	100	6	4	(7)
2-6GM8	(5-8)	2	6.3	100	1	4	(2)
1-6GV8	(5-8)	4	6.3	78	1	4	(2)
2-6GV8	(3-5)	2	6.3	84	6-7	4	(9)
1-6GY8	(4-7-8)	4	6.3	100	2	5	(1)
2-6GY8	(4-7)	4	6.3	100	9	5	(3)
3-6GY8	(4-8)	4	6.3	100	6	5	
6GZ5	(2-4-5)	1	6.3	83	6-7	3	(6)
6H4	(7)	2	6.3	52	4	2	
1-6H5	(6)	4	6.3	50	2-4	1 Eye Closed	
2-6H5	(6)	4	6.3	50	4	1 Eye Open	
1-6H8	(7)	1	6.3	50	5	2-8 Good=40	
2-6H8	(7)	1	6.3	50	4	2-8 Good=40	
3-6H8	(7)	4	6.3	84	3-6	2	(6)
1-6HC8	(5-8)	4	6.3	36	6-7	4	(7)
2-6HC8	(2-5)	2	6.3	42	1-9	4	(1)
6HM6	(1-3-5)	4	6.3	40	7-8	4	(2)
6HR6	(4)	4	6.3	42	5-6	3	(1)
6HS6	(4)	4	6.3	40	5-6	3	(6)
6HT6	(1-3-5)	4	6.3	40	7-8	4	(2)
1-6HU6	(2-5-6-8)	2	6.3	44	1-9	4	(1)
2-6HU6	(5)	4	6.3	0	2-6-7-8	4 Eye Closed	
3-6HU6	(5)	4	6.3	0	2-6-7-8	4	
			Eye Opens as Selector Switch "7" Is Pulled Down				
1-6HW8	(5)	4	6.3	73	2-3	4	(6)
2-6HW8	(5)	4	6.3	73	2-8	4	(6)
1-6HZ8	(5-6)	4	6.3	100	3	4	(2)
2-6HZ8	(1-5)	4	6.3	36	8-9	4	(7)
6J4	(1-4-5-6)	4	6.3	64	7	3	
6J5	(7)	4	6.3	76	3	2	(5)
1-6J8	(7)	2	6.3	52	3-0	2	(0)
2-6J8	(7)	2	6.3	56	5-6	2	(5)

TUBE		A	B	C	U	D	
1-6J9	(3-5)	4	6.3	82	8	4	(7)
2-6J9	(3-5)	4	6.3	82	6	4	(9)
3-6J9	(5-0)	4	6.3	76	1	4	(2)
1-6J10	(8)	4	6.3	32	2-9	—	(2)
2-6J10	(3)	4	6.3	80	4-5-6	—	(6)
1-6J11	(8)	4	6.3	46	2-3	—	(5)
2-6J11	(6)	4	6.3	36	7-9	—	(1)
1-6JA8	(5-6)	4	6.3	100	3	4	(2)
2-6JA8	(1-5)	4	6.3	45	8-9	4	(7)
1-6JB8	(5-8)	4	6.3	55	3-6	4	(2)
2-6JB8	(5-7)	4	6.3	60	5	4	(9)
6K5	(7)	2	6.3	44	3-0	2	(0)
6K7	(7)	2	6.3	60	3-0	2	(0)
1-6K8	(7)	4	6.3	46	1-3-4-0	2	(4)
2-6K8	(7)	4	6.3	86	6	2	(5)
1-6KD8	(5-7)	4	6.3	54	1	4	(9)
2-6KD8	(5-8)	4	6.3	51	3-6	4	(2)
1-6KL8	(5)	4	6.3	75	6-7	4	(2)
2-6KL8	(5)	1	6.3	100	8	4	
1-6KZ8	(3-5)	4	6.3	44	1	4	(9)
2-6KZ8	(5-8)	4	6.3	53	6-7	4	(2)
6L5	(7)	4	6.3	78	3	2	(5)
1-6L7	(7)	4	6.3	26	0-4	2	(0)
2-6L7	(7)	4	6.3	28	3-0	2	(0)
1-6L12	(5-8)	4	6.3	84	1	4	(2)
2-6L12	(3-5)	4	6.3	84	6	4	(7)
1-6LD12	(3-5)	1	6.3	42	1	4	
2-6LD12	(5-7)	1	6.3	42	2	4	
3-6LD12	(3-5)	2	6.3	46	8-9	4	(8)
4-6LD12	(3-5)	1	6.3	64	6	4-7	
1-6M2	(7)	4	6.3	0	3-5-6	2 Eyes Closed	
2-6M2	(7)	4	6.3	0	5-6	2 Left Eye Open	
3-6M2	(7)	4	6.3	0	3-5	2 Right Eye Open	
6M6	(7)	4	6.3	34	3-4	2	(4)
1-6M11	(4-9)	4	6.3	46	1-3	—	(2)
2-6M11	(9-0)	4	6.3	72	6	—	(5)
3-6M11	(4-0)	4	6.3	68	7	—	(8)
1-6N5	(6)	4	6.3	40	2-4	1 Eye Closed	
2-6N5	(6)	4	6.3	40	4	1 Eye Open	
1-6N6	(7)	2	6.3	68	4-5	2	(5)
2-6N6	(7)	2	6.3	46	3-5	2-8	
1-6N8	(5)	4	6.3	56	1-6	4	(1)
2-6N8	(5)	1	6.3	64	7	3-4	
3-6N8	(5)	1	6.3	52	8	3-4	
6P5	(7)	4	6.3	76	3	2	(5)
6P15	(1-2-5)	4	6.3	35	7-9	4	(9)
6P17	(4)	4	6.3	48	5-7	3	(7)
6Q4	(1-2-5-7-8)	4	6.3	64	9	4	

TUBE		A	B	C	D	D	
1-6Q6	(7)	2	6.3	46	3-0	2	(0)
2-6Q6	(7)	2	6.3	74	4	2-8	
1-6Q7	(7)	2	6.3	48	3-0	2	(0)
2-6Q7	(7)	1	6.3	66	5	2-8	
3-6Q7	(7)	1	6.3	68	4	2-8	
1-6Q11	(3-6)	4	6.3	68	0		(9)
2-6Q11	(3-4)	2	6.3	44	5-7		(7)
3-6Q11	(4-6)	2	6.3	44	1-2		(1)
6R3	(5)	3	6.3	25	2-9	4-0	
6R4	(5)	4	6.3	48	8	4	
6R6	(7)	4	6.3	74	3-5	2	(3)
1-6R7	(7)	2	6.3	46	3-0	2	(0)
2-6R7	(7)	1	6.3	68	4	2-8	
3-6R7	(7)	1	6.3	68	5	2-8	
1-6R8	(5-7)	2	6.3	46	2	4	
2-6R8	(3-5)	1	6.3	44	1	4	
3-6R8	(3-5)	1	6.3	44	6	4	
4-6R8	(3-5)	4	6.3	75	9	4	(8)
6S2	(1-4-6-9)	4	6.3	64	0	2-5-8	
6S7	(7)	2	6.3	54	3-0	2	(0)
1-6S8	(5-8)	2	6.3	46	6-0	7	(0)
2-6S8	(5-8)	1	6.3	66	1	2-7	
3-6S8	(5-8)	1	6.3	70	4	7	
4-6S8	(2-8)	1	6.3	62	3	5-7	
1-6SB7	(7)	4	6.3	40	4	2	
2-6SB7	(7)	4	6.3	38	3-4	2	(4)
6SD7	(7)	4	6.3	50	6-8	2	(6)
6SF5	(8)	4	6.3	44	3-5	7	(3)
1-6SF7	(8)	4	6.3	50	4-6	7	(4)
2-6SF7	(8)	1	6.3	100	5	7	
6SG7	(3-5-7)	4	6.3	58	6-8	2	(6)
6SH7	(3-5-7)	4	6.3	70	6-8	2	(6)
1-6SR7	(8)	4	6.3	26	2-6	7	(2)
2-6SR7	(8)	1	6.3	80	4	3-7	
3-6SR7	(8)	1	6.3	80	5	3-7	
6SS7	(7)	4	6.3	56	6-8	2	(6)
1-6ST7	(8)	4	6.3	73	6	7	(2)
2-6ST7	(8)	1	6.3	74	4	3-7	
3-6ST7	(8)	1	6.3	74	5	3-7	
1-6SU7	(3-8)	2	6.3	48	4-5	7	(4)
2-6SU7	(6-8)	2	6.3	48	1-2	7	(1)
1-6SV7	(8)	4	6.3	88	4-6	7	(4)
2-6SV7	(8)	1	6.3	48	5	7	
1-6SZ7	(8)	2	6.3	48	2-6	7	(2)
2-6SZ7	(8)	1	6.3	96	4	3-7	
3-6SZ7	(8)	1	6.3	96	5	3-7	
6T4	(2-4-6)	4	6.3	42	1-7	3	
6T5	(6)	4	6.3	0	2-4	1 Eye Closed	
1-6T9	(9)	3	6.3	30	2-4	—	(4)
2-6T9	(5)	4	6.3	40	1-0	—	(8)
1-6T7	(7)	2	6.3	46	3-0	2	(0)
2-6T7	(7)	2	6.3	74	4	2-8	
3-6T7	(7)	2	6.3	74	5	2-8	

TUBE		A	B	C	D	D	
1-6T10	(2)	4	6.3	40	1-0	—	(8)
2-6T10	(9)	4	6.3	74	5-6-7	—	(3)
6U3	(5)	3	6.3	28	9	4	
6U4	(8)	3	6.3	28	5	7	
1-6U5	(6)	4	6.3	50	2-4	1 Eye Closed	
2-6U5	(6)	4	6.3	50	4	1 Eye Open	
6U6	(7)	4	6.3	30	3-4	2	(4)
6U7	(7)	4	6.3	54	3-4	2	(4)
1-6V4	(5)	3	6.3	46	1	4	
2-6V4	(5)	3	6.3	46	7	4	
6V5	(8)	4	6.3	40	3-4	7	(4)
1-6V7	(7)	4	6.3	25	3-0	2	(0)
2-6V7	(7)	1	6.3	86	4	2	
3-6V7	(7)	1	6.3	86	5	2	
1-6V8	(5-8)	1	6.3	40	2	4	
2-6V8	(5-8)	1	6.3	100	9	4	
3-6V8	(5-8)	2	6.3	45	1-6	4	(6)
4-6V8	(3-5)	1	6.3	40	7	4	
6W7	(7)	4	6.3	80	3-4	2	(4)
1-6Y5	(6)	3	6.3	40	3	1	
2-6Y5	(6)	3	6.3	40	5	1	
6Y6	(7)	4	6.3	30	3-4	2	(4)
1-6Y7	(7)	4	6.3	26	3-4	2	(4)
2-6Y7	(7)	4	6.3	26	5-6	2	(5)
6Z3	(4)	3	6.3	40	2	1	
1-6Z4	(5)	3	6.3	43	2	1	
2-6Z4	(5)	3	6.3	43	3	1	
1-6Z5	(2-6)	3	6.3	40	3	1	
2-6Z5	(2-6)	3	6.3	40	5	1	
1-6Z6	(7-8)	3	6.3	38	3	2	
2-6Z6	(4-7)	3	6.3	38	5	2	
1-6Z7	(7)	2	6.3	46	3-4	2	(4)
2-6Z7	(7)	2	6.3	46	5-6	2	(5)
1-6ZY5	(7)	3	6.3	46	3	2	
2-6ZY5	(7)	3	6.3	46	5	2	
7A4	(8)	4	6.3	70	2	1	(6)
7A5	(8)	4	6.3	32	2-3	1	(3)
1-7A6	(7-8)	2	6.3	54	3	1	
2-7A6	(2-8)	2	6.3	54	6	1	
7A7	(8)	4	7.5	54	2-3	1	(3)
1-7A8	(8)	4	7.5	45	2-5	1	(5)
2-7A8	(8)	2	7.5	50	3-4	1	(4)
7AD7	(8)	4	7.5	40	2-3	1	(3)
1-7AF7	(7-8)	4	7.5	68	3	1	(4)
2-7AF7	(2-8)	4	7.5	68	6	1	(5)
7AG7	(8)	4	6.3	100	2-3	1	(3)
7AH7	(8)	4	6.3	92	2-3	1	(3)
7AK7	(8)	4	6.3	38	2-3	1	(3)
1-7AN7	(1-5-7-8)	4	7.5	44	9	4	(6)
2-7AN7	(5-7-8)	4	7.5	40	3	4	(2)

TUBE		A	B	C	D	D	
1-7AU7	(4-5-8)	4	3	26	1-2	9	(2)
2-7AU7	(3-4-5)	4	3	26	6-7	9	(7)
7B4	(8)	2	6.3	74	2-8	1	(6)
7B5	(8)	4	6.3	42	2-3	1	(3)
1-7B6	(4-7-8)	2	6.3	46	2-3	1	(3)
2-7B6	(4-7-8)	1	6.3	100	5	1	
3-7B6	(4-7-8)	1	6.3	100	6	1	
7B7	(8)	4	6.3	62	2-3	1	(3)
1-7B8	(8)	4	6.3	46	2-5	1	(5)
2-7B8	(8)	2	6.3	44	3-4	1	(4)
7C4	(8)	3	6.3	72	4	1	
1-7C6	(4-7-8)	2	6.3	52	2-3	1	(3)
2-7C6	(8)	1	6.3	60	5	1-4-7	
3-7C6	(8)	1	6.3	80	6	1-4-7	
7C7	(8)	4	6.3	78	2-3	1	(3)
7D9	(4)	4	6.3	48	5-7	3	(7)
1-7DJ8	(5-8)	4	7.5	40	1	4	(2)
2-7DJ8	(3-5)	4	7.5	40	6	4	(7)
7E5	(1-4-5-6-8)	4	6.3	94	3-7	2	
1-7E6	(4-7-8)	2	6.3	50	2-3	1	(3)
2-7E6	(4-7-8)	1	6.3	100	5	1	
3-7E6	(4-7-8)	1	6.3	100	6	1	
1-7E7	(8)	2	6.3	52	3	1-7	
2-7E7	(8)	2	6.3	52	4	1-7	
3-7E7	(8)	4	6.3	60	2-5	1	(5)
7EY6	(7)	4	7.5	34	3-4	2	(4)
1-7F8	(5-7)	2	6.3	42	1-3	2	(1)
2-7F8	(4-7)	2	6.3	42	6-8	2	(8)
1-7FC7	(1-5-7-8)	4	7.5	36	9	4	(6)
2-7FC7	(5-7-8)	4	7.5	30	3	4	(2)
7G7	(8)	4	7.5	50	2-3	1	(3)
7H7	(8)	4	6.3	58	2-3	1	(3)
1-7HG8	(1-3-5)	4	7.5	38	7	4	
2-7HG8	(1-3-5)	4	7.5	48	8-9	4	(2)
1-7J7	(8)	2	6.3	52	3-4	1	(4)
2-7J7	(8)	4	6.3	64	2-5	1	(5)
3-7J7	(8)	2	6.3	42	5-6	1	(6)
1-7K7	(7-8)	2	6.3	48	3-4	1	(4)
2-7K7	(2-8)	1	6.3	75	5	1-7	
3-7K7	(2-8)	1	6.3	75	6	1-7	
7L7	(8)	4	6.3	70	2-3	1	(3
1-7Q7	(8)	4	7.5	44	2-3	1	(3
2-7Q7	(8)	2	7.5	42	3-4	1	(4
1-7R7	(8)	1	6.3	82	3	1-7	
2-7R7	(8)	1	6.3	82	4	1-7	
3-7R7	(8)	4	6.3	72	2-5	1	(5
1-7S7	(8)	2	6.3	62	3-4	1	(4
2-7S7	(8)	4	6.3	82	2-5	1	(5
3-7S7	(8)	2	6.3	46	5-6	1	(
7T7	(8)	4	6.3	62	2-3	1	(
7V7	(8)	4	6.3	52	2-3	1	(
7W7	(4-7-8)	4	7.5	50	2-3	1	(

TUBE		A	B	C	U	D	
1-7X6	(7-8)	3	6.3	30	3	1	
2-7X6	(2-8)	3	6.3	30	6	1	
1-7X7	(7-8)	2	6.3	56	2-3	1	(3)
2-7X7	(7-8)	1	6.3	100	5	1	
3-7X7	(4-8)	1	6.3	100	6	1	
1-7Y4	(8)	3	6.3	43	3	1	
2-7Y4	(8)	3	6.3	43	6	1	
1-7Z4	(8)	3	6.3	58	3	1	
2-7Z4	(8)	3	6.3	58	6	1	
1-8A8	(5-8)	4	7.5	68	3-6	4	(3)
2-8A8	(5-7)	4	7.5	46	1	4	(9)
8BQ5	(1-2-5)	4	7.5	36	7-9	4	(9)
1-8CN7	(4-5-6)	1	4.2	38	2	9	
2-8CN7	(4-5-6)	1	4.2	38	1	9	
3-8CN7	(3-4-5)	2	4.2	42	7-8	9	(7)
8D3	(4)	4	6.3	90	5-7	3	(7)
1-8SN7	(6-8)	4	7.5	28	1-2	7	(1)
2-8SN7	(3-8)	4	7.5	28	4-5	7	(4)
9AB4	(4)	2	7.5	44	1-6	3	(6)
1-9AK8	(3-5)	2	7.5	46	8-9	4	(8)
2-9AK8	(3-5)	1	7.5	100	6	4	
3-9AK8	(3-5)	1	7.5	46	1	4	
4-9AK8	(5-7)	1	7.5	46	2	4	
1-9AQ8	(3-5)	4	7.5	88	6	4	(7)
2-9AQ8	(5-8)	4	7.5	100	1	4	(2)
1-9CG8	(3-5-8)	1	7.5	46	1-2	4	(1)
2-9CG8	(3-5-8)	2	7.5	42	6-9	4	(9)
9D6	(4)	4	6.3	100	5-7	3	(7)
1-9DZ8	(5-8)	4	7.5	32	6-7	4	(7)
2-9DZ8	(2-5)	2	7.5	80	1-9	4	(1)
1-9U8	(5-8)	4	7.5	60	3-6	4	(3)
2-9U8	(5-7)	4	7.5	62	1	4	(9)
10	(4)	4	7.5	50	2	1	
1-10C8	(5-9)	4	12.6	90	1	4	(2)
2-10C8	(3-5)	4	12.6	48	6-7	4	(7)
1-10EW7	(2-3-5-8)	4	7.5	28	1	4	
2-10EW7	(2-3-5-9)	4	7.5	64	6	4	
1-10GF7	(1-5)	2	7.5	90	6	4	(2)
2-10GF7	(3-5)	2	7.5	48	8-9	4	(9)
1-10L14	(3-5)	4	2.5	88	6	4	(7)
2-10L14	(5-8)	4	2.5	88	1	4	(2)
1-10LD12	(3-5)	1	3.2	30	1	4-7	
2-10LD12	(5-7)	1	3.2	30	2	3-4	
3-10LD12	(3-5)	4	3.2	28	8-9	4	(8)
4-10LD12	(3-5)	1	3.2	72	6	4-7	
12A	(4)	4	5	42	2	1	
12A4	(2-4-5-7)	4	6.3	40	9	3	
12A5	(1-7)	4	6.3	36	2-3	6	(3)
12A6	(7)	4	12.6	52	3-4	2	(4)
1-12A7	(4-7)	2	12.6	86	2-0	1	(0)
2-12A7	(6-7)	3	12.6	46	5	1	
1-12A8	(7)	4	12.6	54	3-4	2	(4)
2-12A8	(7)	2	12.6	68	5-6	2	(5)
12AS5	(2-4-5)	4	12.6	32	6-7	3	(6)
1-12AV6	(4)	2	12.6	56	1-7	3	(1)
2-12AV6	(4)	1	12.6	56	5	2-3	
3-12AV6	(4)	1	12.6	56	6	2-3	
12AW6	(4)	4	12.6	76	5-6	3	(6)
12B7	(8)	4	12.6	54	2-3	1	(3)
1-12B8	(6-7)	2	12.6	62	3-0	2	(0)
2-12B8	(1-7)	2	12.6	52	5-8	2	(8)
1-12BF6	(4)	4	12.6	82	7	3	(1)
2-12BF6	(4)	1	12.6	50	5	2-3	
3-12BF6	(4)	1	12.6	70	6	2-3	
12BN6	(4)	4	12.6	68	5-7	3	(5)
12BS3	(5)	3	12.6	34	2-7	4	
12BV7	(3-4-5-9)	4	6.3	44	7-8	6	(8)
1-12BW4	(5)	3	12.6	74	7	4	
2-12BW4	(5)	3	12.6	74	1	4	
12BZ6	(4)	4	12.6	48	5-6	3	(6)
1-12C8	(7)	4	12.6	74	3-6	2	(6)
2-12C8	(7)	1	12.6	100	4	2-8	
3-12C8	(7)	1	12.6	100	5	2-8	
12CN5	(2-4-5)	2	12.6	100	6-7	3	(6)
1-12CR6	(4)	4	12.6	52	5-6	3	(6)
2-12CR6	(4)	1	12.6	46	2	1-3	
12CS6	(4)	2	12.6	60	1-5-6	3	(1)
1-12CT8	(5-9)	4	12.6	84	1	4	(2)
2-12CT8	(3-5)	4	12.6	40	6-7	4	(7)
12CU6	(7)	4	12.6	31	4-0	2	(4)
12CX6	(4)	2	12.6	50	1-5	3	(1)
1-12DE8	(5-9)	1	12.6	68	3	4	
2-12DE8	(2-5)	2	12.6	52	1-6	4	(1)
1-12DF7	(4-5-8)	2	6.3	44	1-2	9	(2)
2-12DF7	(3-4-5)	2	6.3	44	6-7	9	(7)
1-12DJ8	(5-8)	4	12.6	40	1	4	(2)
2-12DJ8	(3-5)	4	12.6	40	6	4	(7)
12DK6	(4)	4	12.6	54	5-6	3	(6)
1-12DK7	(1-5-8)	2	12.6	68	3-7	4	(3)
2-12DK7	(1-5-8)	1	12.6	66	6	2-4	
3-12DK7	(1-5-8)	1	12.6	100	9	2-4	
12DM4	(8)	4	12.6	25	5	7	
1-12DM7	(4-5-8)	2	6.3	46	1-2	9	(2)
2-12DM7	(3-4-5)	2	6.3	46	6-7	9	(7)
12DQ4	(8)	4	12.6	26	5	7	
1-12DT7	(4-5-8)	2	6.3	46	1-2	9	(2)
2-12DT7	(3-4-5)	2	6.3	46	6-7	9	(7)
1-12DU7	(5)	2	12.6	62	3-6	4	(3)
2-12DU7	(5)	1	12.6	100	7	2-4	
3-12DU7	(5)	1	12.6	100	9	2-4	
1-12DV7	(4-5-8)	1	6.3	100	2	1-9	
2-12DV7	(4-5-8)	1	6.3	100	3	1-9	
3-12DV7	(1-4-5)	2	6.3	48	6-7	9	(7)
1-12DV8	(5-8)	4	12.6	78	6-7	4	(7)
2-12DV8	(2-5)	1	12.6	50	1	4-8	
1-12DW7	(4-5-8)	4	6.3	68	1	9	(2)
2-12DW7	(3-4-5)	2	6.3	40	6-7	9	(7)
1-12DW8	(5-8)	2	12.6	66	1	4	(2)
2-12DW8	(3-5)	1	12.5	100	6	4	(7)
3-12DW8	(3-5)	1	12.6	72	9	4	
1-12DY8	(5-7)	2	12.6	70	3-6	4	(3)
2-12DY8	(2-5)	2	12.6	54	8-9	4	(9)
12E5	(7)	4	12.6	76	3	2	(5)
1-12EC6	(4)	2	12.6	54	1-6	3	(1)
2-12EC6	(4)	2	12.6	54	1-5-6	3	(1)
1-12EC8	(5-8)	2	12.6	48	1-2	4	(1)
2-12EC8	(3-5)	2	12.6	46	6-9	4	(9)
12EH5	(2-4-5)	4	12.6	32	6-7	3	(6)
1-12EL6	(4)	2	12.6	56	1-2	3	(1)
2-12EL6	(4)	1	12.6	60	5	3-7	
3-12EL6	(4)	1	12.6	76	6	3-7	
1-12EM6	(5)	2	12.6	80	3-6	4	(3)
2-12EM6	(5)	1	12.6	78	9	2-4	
12EZ6	(4)	2	12.6	48	1-5	3	(1)
12F5	(7)	2	12.6	56	4-0	2	(0)
12FA6	(4)	2	12.6	50	1-5-6	3	(1)
1-12FK6	(4)	2	12.6	52	1-7	3	(1)
2-12FK6	(4)	1	12.6	66	5	2-3	
3-12FK6	(4)	1	12.6	53	6	2-3	
1-12FM6	(4)	2	12.6	52	1-7	3	(1)
2-12FM6	(4)	1	12.6	66	5	2-3	
3-12FM6	(4)	1	12.6	86	6	2-3	
1-12FQ8	(5)	2	12.6	56	1-2	4	(2)
2-12FQ8	(5)	2	12.6	56	2-3	4	(2)
3-12FQ8	(5)	2	12.6	56	6-7	4	(7)
4-12FQ8	(5)	2	12.6	56	7-8	4	(7)
1-12FR8	(2-5)	2	12.6	92	6-7	4	(6)
2-12FR8	(5)	2	12.6	52	1-9	4	(1)
3-12FR8	(5)	1	12.6	74	8	2-4	
12FU6	(4)	4	12.6	36	5-6	3	(6)
1-12FV7	(5-8-9)	4	12.6	31	1	4	(2)
2-12FV7	(3-4-9)	4	12.6	31	6	5	(7)
12FX5	(2-4-5)	4	12.6	31	6-7	3	
1-12FX8	(5)	4	12.6	28	1-3	4	(1)
2-12FX8	(5-7)	4	12.6	43	8	4	(6)
1-12G8	(4-5-7)	2	6.3	36	1-3	9	(3)
2-12G8	(2-4-5)	2	6.3	36	6-8	9	(8)
1-12GA6	(4)	2	12.6	52	1-5	3	(1)
2-12GA6	(4)	1	12.6	100	5-6	3	(6)
12GW6	(7)	4	12.6	30	4-0	2	(4)
1-12H6	(7-8)	3	12.6	86	3	2	
2-12H6	(4-7)	3	12.6	86	5	2	
1-12HK6	(4)	2	12.6	56	1-7	3	(1)
2-12HK6	(4)	1	12.6	56	5	2-3	
3-12HK6	(4)	1	12.6	56	6	2-3	
12J5	(7)	4	12.6	66	3	2	(5)
12J7	(7)	2	12.6	64	3-0	2	(0)

TUBE		A	B	C	U	D	
1-12J8	(5-7)	2	12.6	60	3-6	4	(3)
2-12J8	(2-5)	1	12.6	64	8	4	
3-12J8	(2-5))	1	12.6	64	9	4	
1-12K8	(7)	4	12.6	56	3-4	2	(4)
2-12K8	(7)	4	12.6	70	6	2	(5)
1-12KL8	(5)	4	12.6	76	6-7	4	(2)
2-12KL8	(5)	1	12.6	50	8	4 Good=35	
1-12L8	(7)	4	12.6	44	4-5	6	(5)
2-12L8	(7)	4	12.6	44	5-8	6	(5)
1-12Q7	(7)	2	12.6	60	3-0	2	(0)
2-12Q7	(7)	1	12.6	54	4	2-8	
3-12Q7	(7)	1	12.6	54	5	2-8	
12R5	(2-4-5)	4	12.6	30	6-7	3	(6)
1-12S8	(5-8)	2	12.6	62	6-0	7	(0)
2-12S8	(5-8)	1	12.6	62	1	2-7	
3-12S8	(5-8)	1	12.6	62	4	2-7	
4-12S8	(2-8)	1	12.6	64	3	5-7	
1-12SC7	(8)	2	12.6	68	2-3	7	(3)
2-12SC7	(8)	2	12.6	68	4-5	7	(4)
12SF5	(8)	2	12.6	60	3-5	7	(3)
1-12SF7	(8)	4	12.6	53	4-6	7	(4)
2-12SF7	(8)	1	12.6	74	5	3-7	
12SG7	(3-5-7)	4	12.6	54	6-8	2	(6)
12SH7	(3-5-7)	4	12.6	70	6-8	2	(6)
1-12SQ7	(8)	2	12.6	62	2-6	7	(2)
2-12SQ7	(8)	1	12.6	56	4	3-7	
3-12SQ7	(8)	1	12.6	48	5	3-7	
1-12SR7	(8)	4	12.6	82	6	7	(2)
2-12SR7	(8)	1	12.6	100	4	3-7	
3-12SR7	(8)	1	12.6	70	5	3-7	
1-12SW7	(8)	2	12.6	68	2-6	7	(2)
2-12SW7	(8)	1	12.6	66	4	3-7	
3-12SW7	(8)	1	12.6	66	5	3-7	
1-12SX7	(6-8)	4	12.6	80	2	7	(1)
2-12SX7	(3-8)	4	12.6	74	5	7	(4)
1-12SY7	(7)	4	12.6	48	3-4	2	(4)
2-12SY7	(7)	2	12.6	58	5-8	2	(5)
12X3	(4)	4	12.6	40	0	1	
12Z3	(4)	3	12.6	42	2	1	
1-12Z5	(2-6)	3	6.3	40	3	1	
2-12Z5	(2-6)	3	6.3	40	5	1	
1-13	(4)	3	5	48	2	1	
2-13	(4)	3	5	54	3	1	
1-13D2	(6-8)	4	6.3	72	2	7	(1)
2-13D2	(3-8)	4	6.3	72	5	7	(4)
1-13J10	(8)	4	12.6	34	2-9	—	(2)
2-13J10	(3)	4	12.6	80	4-5-6	—	(6)
14A4	(8)	4	12.6	76	2	1	(6)
14A5	(8)	4	12.6	48	2-3	1	(3)
14A7	(8)	4	12.6	52	2-3	1	(3)
1-14AF7	(7-8)	4	12.6	70	3	1	(4)
2-14AF7	(2-8)	4	12.6	70	6	1	(5)

TUBE		A	B	C	U	D	
1-14B6	(4-7-8)	2	12.6	60	2-3	1	(3)
2-14B6	(8)	1	12.6	88	5	1-4-7	
3-14B6	(8)	1	12.6	88	6	1-4-7	
1-14B8	(8)	4	12.6	46	2-5	1	(5)
2-14B8	(8)	2	12.6	56	3-4	1	(4)
14C5	(8)	4	12.6	44	2-3	1	(3)
14C7	(8)	4	12.6	78	2-3	1	(3)
1-14E6	(8)	4	12.6	40	2	1-4-7	(3)
2-14E6	(8)	1	12.6	68	5	1-4-7	
3-14E6	(8)	1	12.6	68	6	1-4-7	
1-14E7	(8)	1	12.6	100	3	1-7	
2-14E7	(8)	1	12.6	100	4	1-7	
3-14E7	(8)	4	12.6	65	2-5	1	(5)
1-14F7	(7-8)	4	12.6	65	3-4	1	(4)
2-14F7	(2-8)	4	12.6	65	5-6	1	(5)
1-14F8	(5-7)	4	12.6	26	1-3	2	(1)
2-14F8	(4-7)	4	12.6	26	6-8	2	(8)
1-14GT8	(1-5-7)	1	12.6	66	2	4	
2-14GT8	(3-5-7)	1	12.6	66	6	4	
3-14GT8	(1-3-5)	2	12.6	62	8-9	4	(8)
14H7	(8)	4	12.6	54	2-3	1	(3)
1-14J7	(8)	2	12.6	72	3-4	1	(4)
2-14J7	(8)	2	12.6	54	2-6	1	(6)
1-14JG8	(1-5-7)	1	12.6	72	2	4	
2-14JG8	(3-5-7)	1	12.6	72	6	4	
3-14JG8	(1-3-5)	2	12.6	60	8-9	4	(8)
1-14N7	(7-8)	4	12.6	76	3	1	(4)
2-14N7	(2-8)	4	12.6	76	6	1	(5)
1-14Q7	(8)	4	12.6	42	2-3	1	(3)
2-14Q7	(8)	2	12.6	50	3-4	1	(4)
1-14R7	(8)	2	12.6	54	2-6	1	(6)
2-14R7	(8)	1	12.6	56	4	1-7	
3-14R7	(8)	1	12.6	56	3	1-7	
1-14S7	(8)	2	12.6	82	3-4	1	(4)
2-14S7	(8)	2	12.6	54	2-6	1	(6)
14W7	(4-7-8)	4	12.6	54	2-3	1	(3)
1-14X7	(7-8)	2	12.6	68	2-3	1	(3)
2-14X7	(7-8)	1	12.6	70	5	1	
3-14X7	(4-8)	1	12.6	70	6	1	
1-14Y4	(8)	3	12.6	58	3	1	
2-14Y4	(8)	3	12.6	58	6	1	
15	(5)	2	2	60	2-0	1	(0)
15A6	(5)	4	12.6	44	1-7	4	(1)
1-15DQ8	(3-5)	4	12.6	56	6-9	4	(9)
2-15DQ8	(5-7)	4	12.6	24	1-2	4	(1)
15EW6	(4)	4	12.6	50	5-6	3	(6)
16A5	(5)	4	19.6	32	7-9	4	(9)
1-16A8	(5-8)	4	19.6	32	6-7	4	(7)
2-16A8	(2-5)	3	19.6	24	1-9	4	(1)
16GK6	(3-5-9)	4	12.6	36	7-8	4	(8)
16GY5	(4-5-9-0)	4	12.6	29	1-3-7	—	—
17	(5)	4	12.6	82	2	1	(3)
17AV5	(7)	4	19.6	30	5-8	2	(8)

TUBE		A	B	C	U	D	
17C5	(2-4-5)	4	19.6	34	6-7	3	(6)
1-17C8	(5)	4	19.6	52	1-6	4	(1)
2-17C8	(5)	1	19.6	50	7	3-4	
3-17C8	(5)	1	19.6	62	8	3-4	
1-17EW8	(5-8)	4	19.6	74	1	4	(2)
2-17EW8	(3-5)	4	19.6	74	6	4	(7)
1-17HC8	(5-8)	4	19.6	34	6-7	4	(7)
2-17HC8	(2-5)	2	19.6	68	1-9	4	(1)
17L6	(7)	4	19.6	30	3-4	2	(4)
17R5	(2-4-5)	4	19.6	30	6-7	3	(6)
17W6	(7)	4	19.6	32	3-4	2	(4)
17Z3	(5)	3	19.6	50	2-9	4	
18	(6)	2	12.6	58	2-4	1	(4)
18A5	(7)	4	19.6	32	5-8	2	(8)
18AQ5	(1-4-7)	4	19.6	42	5-6	3	(6)
1-18C51	(8-9)	4	19.6	68	4	1	(3)
2-18C51	(2-9)	4	19.6	68	6	1	(7)
1-18DZ8	(5-8)	4	19.6	32	6-7	4	(7)
2-18DZ8	(2-5)	2	19.6	80	1-9	4	(1)
1-18HB8	(5-8)	4	19.6	100	3	4	(1)
2-18HB8	(2-5)	4	19.6	33	6-7	4	(9)
1-19	(6)	4	2	28	2-3	1	(3)
2-19	(6)	4	2	28	4-5	1	(4)
1-19BR5	(3-5-8-9)	2	19.6	100	1-7	4	(1)
2-19BR5	(5)	4	19.6	0	3-7-8-9	4 Eye Open	
3-19BR5	(5)	4	19.6	0	3-8-9	4 Eye Closed	
1-19C8	(5-7)	2	19.6	90	2	4	
2-19C8	(3-5)	2	19.6	94	8-9	4	(8)
3-19C8	(3-5)	2	19.6	86	6	4	
4-19C8	(3-5)	2	19.6	86	1	4	
1-19D8	(5)	4	19.6	58	1	4	
2-19D8	(5)	4	19.6	54	1-6	4	(1)
3-19D8	(5)	4	19.6	68	8	4	(9)
1-19HV8	(5-8)	2	19.6	100	1-2	4	(1)
2-19HV8	(3-5)	4	19.6	50	6-7	4	(7)
1-19J6	(4)	4	19.6	80	1	3	(6)
2-19J6	(4)	4	19.6	68	2	3	(5)
1-19KG8	(5-8)	4	19.6	57	1	4	(2)
2-19KG8	(3-5)	4	19.6	78	6	4-8	(9)
1-19V8	(5-8)	1	19.6	62	9	3-4	
2-19V8	(5-8)	1	19.6	30	2	3-4	
3-19V8	(5-8)	2	19.6	94	1-6	4	(6)
4-19V8	(3-5)	2	19.6	76	7	4	
19X3	(5)	3	19.6	46	9	4	
20	(4)	1	3	52	2-3	1	
1-20EQ7	(5)	4	19.6	60	6-7	4	(6)
2-20EQ7	(5)	1	19.6	100	8	3-4	
21A6	(1-5-6-9)	4	19.6	30	7-8-0	4	
21EX6	(7)	4	25	28	8-0	2	(8)
22	(4)	4	3	80	2-3	1	(3)
24A	(5)	4	2.5	78	2-3	1	(3)
25A6	(7)	4	25	34	3-4	2	(4)

TUBE		A	B	C	U	D	
1-25A7	(1-7)	4	25	36	3-4	2	(4)
2-25A7	(7-8)	2	25	32	6	1-2	
25AC5	(7)	4	25	28	3-5	2	(5)
1-25B5	(6)	2	25	65	3-4	1-5	(4)
2-25B5	(6)	2	25	34	2	1-5	
25B6	(7)	4	25	30	3-4	2	(4)
1-25B8	(6-7)	4	25	60	3-4	2	(4)
2-25B8	(1-7)	4	25	28	5-8	2	(8)
25C6	(7)	4	25	30	3-4	2	(4)
25DK4	(4-6)	3	25	94	5	3	
25DQ6	(7)	4	25	30	4-0	2	(4)
25E5	(3-7-8)	4	25	30	1-4-0	2	(5)
25F5	(2-3-5)	4	25	38	6-7	4	(6)
25N6	(7)	2	25	34	3	2-8	
1-25S	(6)	2	2	54	2-5	1	(5)
2-25S	(6)	1	2	100	3	1	
3-25S	(6)	1	2	100	4	1	
25W4	(8)	3	25	90	5	7	
25W6	(7)	4	25	32	3-4	2	(4)
1-25Y5	(4-6)	4	25	27	2	1	
2-25Y5	(3-6)	4	25	27	5	1	
1-25Z5	(4-6)	3	25	84	2	1	
2-25Z5	(3-6)	3	25	85	5	1	
1-25Z6	(7-8)	3	25	90	3	2	
2-25Z6	(4-7)	3	25	90	5	2	
26	(4)	4	1.4	48	2-3	1	(3)
26A6	(4)	4	25	48	5-6	3	(6)
1-26A7	(7)	4	32	100	4	6	(3)
2-26A7	(7)	4	32	100	8	6	(1)
1-26C6	(4)	4	25	88	7	3	(1)
2-26C6	(4)	1	25	100	5	2-3	
3-26C6	(4)	1	25	100	6	2-3	
1-26D6	(4)	4	25	62	5-6	3	(6)
2-26D6	(4)	4	25	64	6	3	
1-26Z5	(4-5-8)	3	12.6	46	1	9	
2-26Z5	(3-4-5)	3	12.6	46	6	9	
27	(5)	2	2.5	52	2-3	1	(3)
1-28AK8	(3-5)	1	32	30	1	4-7	
2-28AK8	(5-7)	1	32	30	2	3-4	
3-28AK8	(3-5)	4	32	28	8-9	4	(8)
4-28AK8	(3-5)	1	32	72	6	4-7	
1-28D7	(8)	4	25	30	3-4	1	(3)
2-28D7	(8)	4	25	30	3-5	1	(3)
1-29	(6)	2	2.5	52	2-3	1	(3)
2-29	(6)	2	2.5	52	2-4	1	(4)
29GK6	(3-5-9)	4	32	40	7-8	4	(8)
30	(4)	2	2	46	2-3	1	(3)
30A5	(2-4-5)	4	32	26	7	1-3	
1-30C1	(5-8)	4	7.5	68	3-6	4	(3)
2-30C1	(5-7)	4	7.5	46	1	4	(9)
1-30L1	(1-5-7-8)	4	7.5	44	9	4	(6)
2-30L1	(5-7-8)	4	7.5	40	3	4	(2)
30P16	(5)	4	19.6	32	7-9	4	(9)

TUBE		A	B	C	U	D	
31	(4)	2	2	52	2-3	1	(3)
32	(4)	4	2	78	2-3	1	(3)
1-32L7	(1-7)	4	32	33	3-4	2	(4)
2-32L7	(7-8)	4	32	26	6	2	
33	(5)	4	2	40	2-4	1	(4)
1-33GY7	(7-9-0)	1	12.6	57	2	—	
2-33GY7	(4-9-0)	4	12.6	30	1-5	7	
34	(4)	4	2	62	2-3	1	(3)
35	(5)	4	2.5	56	2-3	1	(3)
35A5	(8)	4	32	35	2-3	1	(3)
35B5	(1-4-7)	4	32	35	5-6	3	(6)
1-35DZ8	(5-8)	4	32	32	6-7	4	(7)
2-35DZ8	(2-5)	4	32	30	1-9	4	(1)
1-35HB8	(5-8)	4	32	100	3	4	
						Good=32	
2-35HB8	(2-5)	4	32	34	6-7	4	(6)
35T	(4)	4	6.3	26	0	1	
		Tie Top Cap and Side Pin Together					
35TG	(4)	4	6.3	26	0	1	
		Tie Top Cap and Side Pin Together					
35Z3	(8)	4	35	28	2	1	
35Z4	(7)	3	32	22	5	2-8	
36	(5)	4	6.3	74	2-3	1	(3)
37	(5)	4	6.3	54	2-3	1	(3)
38	(5)	4	6.3	48	2-3	1	(3)
38A3	(5)	4	32	28	1-6-9	4	
39	(5)	4	6.3	64	2-3	1	(3)
40	(4)	2	5	48	2-3	1	(3)
40Z5	(2-3)	3	50	46	5	7	
41	(6)	4	6.3	44	2-3	1	(3)
42	(6)	4	6.3	46	2-3	1	(3)
43	(6)	4	25	35	2-3	1	(3)
44	(5)	4	6.3	64	2-3	1	(3)
45	(4)	4	2.5	38	2	1	
45B5	(1-2-5)	4	50	36	6-7-8-9	4	
45Z3	(7)	3	50	48	2-6	1	
45Z5	(2-3)	3	50	46	5	7	
46	(5)	4	2.5	36	2-4	1	(4)
47	(5)	4	2.5	40	2-4	1	(4)
48	(6)	4	32	30	2-3	1	(3)
49	(5)	2	2	54	2-3	1	(3)
50	(4)	4	7.5	36	2	1	
50A5	(8)	4	50	34	2-3	1	(3)
1-50BM8	(5-8)	4	50	38	6-7	4	(7)
2-50BM8	(2-5)	4	50	30	1-9	4	(1)
50C6	(7)	4	50	34	3-4	2	(4)
50CD6	(7)	4	50	30	8-0	2	(8)
50FK5	(2-4-5)	4	50	42	6-7	3	(6)
50HC6	(4-6)	4	50	34	5-7	3	
1-50X6	(7-8)	3	50	52	3	1	
2-50X6	(2-8)	3	50	52	6	1	

TUBE		A	B	C	U	D	
1-50Y6	(7-8)	3	50	52	3	2	
2-50Y6	(4-7)	3	50	52	5	2	
1-50Y7	(6-7-8)	3	50	50	3	2	
2-50Y7	(4-6-7)	3	50	50	5	2	
1-50Z7	(6-8)	1	50	76	3	2	
2-50Z7	(4-6-7)	1	50	76	5	2	
1-51ARC	(7)	4	2.5	60	3-5	2	(5)
2-51ARC	(5)	4	2.5	56	2-3	1	(3)
52	(5)	4	6.3	100	2	1	(3)
1-53	(7)	2	2.5	46	2-3	1	(3)
2-53	(7)	2	2.5	46	5-6	1	(5)
1-55	(6)	4	2.5	64	2	1	
2-55	(6)	1	2.5	70	3	1	
3-55	(6)	1	2.5	70	4	1	
56	(5)	2	2.5	42	2-3	1	(3)
57	(6)	4	2.5	92	2-3	1	(3)
58	(6)	4	2.5	54	2-3	1	(3)
59	(7)	4	2.5	44	2-3	1	(3)
60FX5	(2-4-5)	4	70	40	6-7	3	(6)
1-70A7	(2)	4	70	38	3-4	1-6-7	(4)
2-70A7	—	3	70	20	—	1-6-7	
		Allow tube to warm up, return levers 6 & 7 to "U" position. Good tube will kick to 70.					
1-70L7	(7)	3	70	24	8	2	
2-70L7	(7)	4	70	38	3-4	2	(4)
71A	(4)	2	5	76	2	1	(3)
72	(4)	4	2.5	36	0	1	
73	(7)	1	2.5	70	0	2	
1-75	(6)	2	6.3	46	2-0	1	(0)
2-75	(6)	1	6.3	90	3	1	
3-75	(6)	1	6.3	90	4	1	
75C1	(2-4-7)	4	0.63	28	1-3-5	Gas Test	
76	(5)	2	6.3	50	2-3	1	(3)
77	(6)	4	6.3	88	2-3	1	(3)
78	(6)	4	6.3	60	2-3	1	(3)
1-79	(6)	4	6.3	28	2-3	1	(3)
2-79	(6)	4	6.3	28	5-0	1	(0)
1-80	(4)	3	5	48	2	1	
2-80	(4)	3	5	54	3	1	
81	(4)	3	7.5	88	2	1	
1-82	(4)	3	2.5	35	2	1	
2-82	(4)	3	2.5	35	3	1	
1-83	(4)	4	6.3	26	2	1	
2-83	(4)	4	6.3	26	3	1	
1-83V	(4)	3	5	30	2	1	
2-83V	(4)	3	5	30	3	1	
1-84	(5)	3	6.3	43	2	1	
2-84	(5)	3	6.3	43	3	1	
1-85	(6)	2	6.3	56	2-0	1	(0)
2-85	(6)	1	6.3	64	3	1-5	
3-85	(6)	1	6.3	64	4	1-5	
85A1	(4-8)	4	Off	50	2	Gas Test	
85A2	(2-4-7)	4	Off	34	1-3-5	Gas Test	

TUBE		A	B	C	U	D	
1-85AS	(6)	4	6.3	100	2	1	(0)
2-85AS	(6)	1	6.3	90	3	1-5	
3-85AS	(6)	1	6.3	70	4	1-5	
89	(6)	4	6.3	46	2-3	1	(3)
90C1	(2-4-7)	4	0.63	28	1-3-5	Gas Test	
99	(4)	4	3	100	2	1	
100TH	(4)	4	6.3	26	0	1	
Tie Side Pin and Top Cap Together							
108C1	(2-4-7)	4	0.63	50	1-5	Gas Test	
1-117L7	(7)	4	110	50	3-5	2	(5)
2-117L7	(7)	1	110	14	6	2	
1-117M7	(7)	4	110	50	3-5	2	(5)
2-117M7	(7)	1	110	14	6	2	
1-117N7	(2)	4	110	50	3-5	7-8	(5)
2-117N7	(2)	3	110	15	—	7-8	
(Allow tube to heat up. Return lever 7 to "U" position. Press value switch. Good tube will kick to 70.)							
1-117P7	(2)	4	110	50	3-5	7-8	(5)
2-117P7	(2)	3	110	16		7-8	
(Allow tube to heat up. Return lever 7 to "U" position. Press value switch. Good tube will kick to 70.)							
117Z3	(4)	3	110	22	5	3-6	
117Z4	(7)	3	110	14	5	2	
1-117Z6	(7)	3	110	22	3	2-4	
2-117Z6	(7)	3	110	22	5	2-8	
120	(4)	1	3	52	2-3	1	
130ARC	(4)	4	2.5	72	2	1	
150C2	(2-4-7)	4	Off	48	1-5		
171A	(4)	4	5	34	2	1	
182B	(4)	4	5	38	2	1	
183	(4)	4	5	38	2	1	
210	(4)	4	7.5	50	2	1	
1-213	(4)	3	5	48	2	1	
2-213	(4)	3	5	54	3	1	
224	(5)	4	2.5	78	2-3	1	(3)
226	(4)	4	2.5	58	2	1	
227	(5)	4	2.5	56	2	1	
230	(4)	2	2	46	2-3	1	(3)
231	(4)	2	2	52	2-3	1	(3)
232	(4)	4	2	78	2-3	1	(3)
234	(4)	4	2	62	2-3	1	(3)
235	(5)	4	2.5	56	2-3	1	(3)
236	(5)	4	6.3	74	2-3	1	(3)
238	(5)	4	5	58	3	1	(0)
240	(4)	2	5	48	2-3	1	(3)
245	(4)	4	2.5	38	2	1	
247	(5)	4	2.5	40	2-4	1	(4)
250	(4)	4	7.5	36	2	1	
262	(4)	2	12.6	76	2-0	1	(0)
264	(4)	2	1.4	62	2-3	1	(3)
271	(4)	2	5	76	2	1	(3)
1-274A	(4)	3	5	50	2	1	
2-274A	(4)	3	5	50	3	1	
1-274B	(8)	3	5	50	4	2	
2-274B	(8)	3	5	50	6	2	
1-280	(4)	3	5	48	2	1	
2-280	(4)	3	5	54	3	1	
282	(4)	4	7.5	40	2-0	1	(2)
287	(5)	4	2	82	2	1	
301	(4)	4	5	24	3	1	
307A	(5)	4	5	70	4-0	1	(4)
310	(4)	4	7.5	50	2	1	
311A	(5)	2	7.5	26	2	1-4	(0)
1-313	(4)	3	5	48	2	1	
2-313	(4)	3	5	54	3	1	
326	(4)	4	1.4	48	2-3	1	(3)
327	(5)	2	2.5	52	2-3	1	(3)
330	(4)	2	2	46	2-3	1	(3)
332	(4)	4	2	78	2-3	1	(3)
333	(5)	4	2	40	2-4	1	(4)
334	(4)	4	2	62	2-3	1	(3)
335	(5)	4	2.5	56	2-3	1	(3)
337	(5)	4	6.3	54	2-3	1	(3)
338	(5)	4	6.3	48	2-3	1	(3)
345	(4)	4	2.5	38	2	1	
350	(7)	4	6.3	32	3-4	2	(4)
367	(7)	4	6.3	36	2-4	5	(4)
Allow 2 Minute Warm Up							
393A	(7-8)	4	2.5	26	0	1-2	
1-396	(8-9)	4	6.3	74	4	1	(3)
2-396	(2-9)	4	6.3	74	6	1	(7)
401A	(2-4-7)	4	6.3	45	5-6	3	
403A	(2-4-7)	4	6.3	50	5-6	3	(6)
403B	(2-4-7)	4	6.3	58	5-6	3	(6)
404A	(9)	4	6.3	34	6-8	3	(8)
1-407	(1-8-9)	2	19.6	100	3-4	5	(3)
2-407	(1-2-9)	2	19.6	100	6-7	5	(7)
408	(2-4-7)	2	19.6	92	1-5	3	(1)
409A	(4)	4	6.3	55	5-6	3	(6)
423A	(2-3)	4	0.63	50	7-8	Gas Test	
440	(4)	2	5	46	2-3	1	(3)
446	(3-5-7-8)	2	6.3	50	0	2	
Tie Top Cap & Middle Ring Together							
482B	(4)	4	5	38	2	1	
483	(4)	4	5	38	2	1	
484	(5)	4	2.5	76	2	1	
485	(5)	4	3	68	2	1	
502A	(7)	4	6.3	26	3-6	2	
559	(1-3-5-7-8)	3	6.3	38	0	2	
585	(4)	1	7.5	46	2-3	1	
615	(7)	2	6.3	48	0	2	
Tie Both Top Caps Together							
708	(3-5-7)	2	1.4	55	0	1	
Loctal Socket Arrows to Pins 1 & 5							
713	(3-5-7)	2	6.3	40	4-8	2	(4)
717	(3-5-7)	2	6.3	42	4-8	2	(4)
722	(4-5)	4	3	26	0	1-2	
800	(4)	4	7.5	28	0	1	
Tie Both Top Caps Together							
801	(4)	4	7.5	60	2	1	
802	(7)	1	6.3	34	5-0	1-6	(4)
807	(5)	4	6.3	36	2-0	1	(2)
808	(4)	4	7.5	26	0	1	
Tie Both Top Caps Together							
809	(4)	4	7.5	28	3-0	1	(3)
811	(4)	4	7.5	28	3-0	1	(3)
1-815	(1-3-6-8)	4	6.3	32	4-0	5 Right Top Cap	(4)
2-815	(1-3-6-8)	4	6.3	32	4-0	5 Left Top Cap	(4)
816	(4)	4	2.5	26	0	1	
830B	(4)	4	7.5	100	0	1	(3)
836	(4)	3	3	32	0	1	
837	(7)	4	12.6	38	3-0	1	(3)
841	(4)	4	7.5	28	2-3	1	(3)
843	(5)	4	2.5	62	2	1	
864	(4)	2	1.4	62	2-3	1	(3)
865	(4)	4	7.5	44	1-0	1	(3)
866A	(4)	4	3	26	0	1	
866JR	(4)	4	3	26	2	1	
874	(2-4)	4	0.63	54	3	Gas Test	
878	(3-4)	4	3	80	0	1-2	
879	(4)	4	2.5	56	0	1	
884	(7)	3	6.3	42	3	2	(5)
885	(5)	4	2.5	26	2	1	
950	(5)	2	2	56	2-3	1	(3)
951	(4)	4	2	70	2-3	1	(3)
1-1003	—	4	0.63	27	3	—	
2-1003	—	4	0.63	27	5	—	
1-1005	(8)	4	6.3	28	3	6	
2-1005	(8)	4	6.3	28	5	6	
1-1006	(4)	4	2	26	2	1	
2-1006	(4)	4	2	34	3	1	
1-1007	(8)	4	1.4	26	3	7	
2-1007	(8)	4	1.4	26	5	7	
1-1012	(4)	4	1.4	30	2	1	
2-1012	(4)	4	1.4	30	3	1	
1013	(1-2-6-7)	4	0.63	38	4-0	—	
1201	(4-6-8)	2	6.3	40	1-3-5-7	2	
1203	(8)	1	6.3	70	4	1	

TUBE		A	B	C	U	D	
1-1216	(4)	4	6.3	52	1	3	(6)
2-1216	(4)	4	6.3	52	2	3	(5)
1217	(4)	4	6.3	40	5-6	3	(6)
1-1219	(8-9)	4	6.3	64	4	1	(3)
2-1219	(2-9)	4	6.3	64	6	1	(7)
1220	(2-4-7)	4	6.3	50	5-6	3	(6)
1221	(6)	4	6.3	86	2-3	1	(3)
1222	(6)	4	6.3	36	2-3	1	(3)
1223	(7)	4	6.3	26	4-0	2	(0)
1-1224	(7)	4	6.3	72	3	2-8	(4)
2-1224	(7)	4	6.3	72	6	2-8	(5)
1229	(4)	4	2	70	2-3	1	(3)
1231	(8)	4	6.3	55	2-3	1	(3)
1232	(8)	4	6.3	50	2-3	1	(3)
1236	(6-7-8)	1	2.5	100	4-5	1-2-3	
1273	(8)	4	6.3	78	2-3	1	(3)
1-1274	(7)	3	6.3	46	3	2	
2-1274	(7)	3	6.3	46	5	2	
1280	(8)	4	12.6	78	2-3	1	(3)
1-1291	(1-8)	2	1.4	40	2-3	4	(3)
2-1291	(1-8)	2	1.4	40	6-7	4	(6)
1294	(8)	1	1.4	68	4	1	
1299	(1-8)	4	1.4	40	2-3	7	(3)
1300/ 01/05	(4-5-7)	4	6.3	26	6	3	
1367	(4)	2	6.3	90	5	3	
1603	(6)	4	6.3	84	2-3	1	(3)
1611	(7)	4	6.3	46	3-4	2	(4)
1612	(7)	4	6.3	48	3-4	2	(4)
1613	(7)	4	6.3	48	3-4	2	(4)
1614	(7)	4	6.3	36	3-4	2	(4)
1616	(4)	4	3	28	0	1	
1619	(7)	4	2.5	46	3-4	2	(4)
1620	(7)	4	6.3	88	3-4	2	(4)
1621	(7)	4	6.3	44	3-4	2	
1622	(7)	4	6.3	26	3-4	2	(4)
1624	(5)	4	2.5	42	2-0	1	(2)
1625	(7)	4	12.6	36	3-0	1	(3)
1626	(7)	2	12.6	66	3-5	2	(5)
1-1629	(7)	4	12.6	30	3-4	2 Eye Closed	
2-1629	(7)	4	12.6	30	4	2 Eye Open	
1631	(7)	4	12.6	36	3-4	2	(4)
1632	(7)	4	12.6	32	3-4	2	(4)
1-1633	(6-8)	4	25	78	2	7	(1)
2-1633	(3-8)	4	25	78	5	7	(4)
1-1634	(8)	4	12.6	26	2-3	7	(3)
2-1634	(8)	4	12.6	26	4-5	7	(4)
1-1635	(7)	4	6.3	26	3-4	2	(4)
2-1635	(7)	4	6.3	26	5-6	2	(5)

TUBE		A	B	C	U	D	
1-1641	(4)	4	6.3	26	0	1 Right Top Cap	
2-1641	(4)	4	6.3	26	0	1 Left Top Cap	
1-1642	(6-7)	2	6.3	50	3-0	1	(0)
2-1642	(2-7)	2	6.3	50	4-5	1	(4)
1-1644	(7)	4	12.6	42	4-5	6	(5)
2-1644	(7)	4	12.6	42	5-8	6	(5)
1-1655	(8)	2	6.3	50	2-3	7	(3)
2-1655	(8)	2	6.3	50	4-5	7	(4)
1851	(7)	4	6.3	68	3-4	2	(4)
1852	(7)	4	6.3	56	6-8	2	(6)
1853	(7)	4	6.3	74	6-8	2	(6)
2050	(7)	4	6.3	26	3	2	
2051	(7)	4	6.3	26	3-6	2	(5)
5121	(4-5-7)	4	6.3	26	6	3	
5517	(1-2-6-7)	4	0.63	38	4-0	—	
5590	(2-4-7)	4	6.3	45	5-6	3	
5610	(4)	4	6.3	48	1-5	3	
5618	(1-7)	4	3	94	2	5	
5642	—	1	1.4	100	0		
Base leads to pins 1 & 12 of Compactron Socket Top cap to Upper wide lead Good=34							
5651	(2-4-7)	4	0.63	38	1-5	Gas Test	
5654	(2-4-7)	4	6.3	54	5-6	3	(6)
1-5656	(5-6-9)	4	6.3	26	2-8	4	(2)
2-5656	(5-6-9)	4	6.3	26	3-7	4	(3)
5662	(2-4-5)	4	6.3	26	7	3	
5663	(4)	3	6.3	36	7	3	
1-5670	(8-9)	4	6.3	64	4	1	(3)
2-5670	(2-9)	4	6.3	64	6	1	(7)
5686	(1-3-5-8)	4	6.3	48	6-7-9	4	
1-5687	(4-5-6)	4	6.3	38	1	8	(2)
2-5687	(3-4-5)	4	6.3	38	9	8	(7)
1-5691	(6-8)	2	6.3	48	1-2	7	(1)
2-5691	(3-8)	2	6.3	48	4-5	7	(4)
1-5692	(6-8)	4	6.3	72	2	7	(1)
2-5692	(3-8)	4	6.3	72	5	7	(4)
5693	(7)	4	6.3	66	6-8	2	(6)
5696	(4-5-7)	3	6.3	32	6	3	
5722	(3-4)	4	5	28	1-6	7	
5725	(4)	4	6.3	55	5-6	3	(6)
1-5726	(1-4)	1	6.3	40	2	3	
2-5726	(4-5)	1	6.3	40	7	3	
5727	(4-5-7)	4	6.3	26	6	3	
5749	(4)	4	6.3	50	5-6	3	(6)
1-5750	(4)	4	6.3	40	5-6	3	(6)
2-5750	(4)	4	6.3	42	6	3	
1-5751	(4-5-8)	2	6.3	46	1-2	9	(2)
2-5751	(3-4-5)	2	6.3	46	6-7	9	(7)
5763	(5-8-9)	4	6.3	40	1-6	4	(6)
1-5814	(4-5-8)	4	6.3	58	1	9	(2)
2-5814	(3-4-5)	4	6.3	52	6	9	(7)

TUBE		A	B	C	U	D	
5823	(3-7)	4	.63	47	1-4	—	—
5824	(7)	4	25	30	3-4	2	(4)
1-5844	(4)	4	6.3	52	1	3	(6)
2-5844	(4)	4	6.3	52	2	3	(5)
5847	(9)	4	6.3	34	6-8	3	(8)
5879	(5)	2	6.3	56	1-8	4	(1)
5881	(7)	4	6.3	37	3-4	2	(4)
5910	(1-5)	1	1.4	38	2-6	7	(6)
1-5915	(4)	4	6.3	42	5-6	3	(6)
2-5915	(4)	4	6.3	26	1-6	3	
1-5920	(4)	4	6.3	48	1	3	(6)
2-5920	(4)	4	6.3	48	2	3	(5)
5930	(4)	4	2.5	30	2	1	
1-5931	(8)	3	5	36	4	2	
2-5931	(8)	3	5	36	6	2	
5932	(7)	4	6.3	36	3-4	2	(4)
5933	(5)	4	6.3	36	2-0	1	(2)
1-5963	(4-5-8)	4	6.3	70	1	9	(2)
2-5963	(3-4-5)	4	6.3	70	6	9	(7)
1-5964	(4)	4	6.3	44	2	3	(5)
2-5964	(4)	4	6.3	48	1	3	(6)
1-5965	(4-5-8)	4	6.3	42	1	9	(2)
2-5965	(3-4-5)	4	6.3	52	6	9	(7)
5992	(7)	4	6.3	42	3-4	2	(4)
1-6004	(8)	3	5	50	0	2 Upper Top Cap	
2-6004	(8)	3	5	50	0	2 Lower Top Cap	
6005	(1-4-7)	4	6.3	40	5-6	3	(6)
6046	(7)	4	25	30	3-4	2	(4)
1-6060	(4-5-8)	4	6.3	84	1	9	(2)
2-6060	(3-4-5)	4	6.3	84	6	9	(7)
1-6063	(4)	4	6.3	28	6	3	
2-6063	(4)	4	6.3	28	1	3	
6065	(4)	4	6.3	94	5-7	3	(7)
6069	(2-4-7)	4	6.3	52	5-6	3	(6)
1-6072	(4-5-8)	4	6.3	26	1-2	9	(2)
2-6072	(3-4-5)	4	6.3	26	6-7	9	(7)
6073	(2-4-7)	4	Off	48	1-5		
6074	(2-4-7)	4	0.63	50	1-5	Gas Test	
1-6080	(6-8)	4	6.3	28	2	7	
2-6080	(3-8)	4	6.3	28	5	7	
1-6082	(6-8)	4	25	28	2	7	
2-6082	(3-8)	4	25	28	5	7	
6084	(2-5-7)	4	6.3	76	1-6	4	(1)
1-6085	(4-5-8)	4	6.3	90	1	9	(2)
2-6085	(3-4-5)	4	6.3	90	6	9	(7)
1-6087	(8)	3	5	60	4	2	
2-6087	(8)	3	5	60	6	2	
6095	(1-4-7)	4	6.3	40	5-6	3	(6)
1-6097	(1-4)	1	6.3	40	2	3	
2-6097	(4-5)	1	6.3	40	7	3	

TUBE		A	B	C	U	D	
6098	(8)	4	6.3	34	3-5	6	(5)
1-6099	(4)	4	6.3	64	1	3	(6)
2-6099	(4)	4	6.3	60	2	3	(5)
6100	(4)	4	6.3	66	1-5	3	(6)
1-6101	(4)	4	6.3	64	1	3	(6)
2-6101	(4)	4	6.3	60	2	3	(5)
1-6106	(2)	2	5	42	4	8	
2-6106	(2)	2	5	42	6	8	
6130	(1)	4	6.3	30	3-0	2-4	
6134	(7)	4	6.3	44	6-8	2	(6)
6135	(4)	4	6.3	72	1-5	3	(6)
6136	(4)	4	6.3	64	5-6	3	(6)
6137	(7)	4	6.3	52	6-8	2	(6)
6140	(2-3)	4	0.63	50	7-8	Gas Test	
6145	(8)	4	6.3	38	2-3-4	1	(6)
6146	(1-4-6-7)	4	6.3	30	3-0	2	(3)
6186	(2-4-7)	4	6.3	64	5-6	3	(6)
6187	(4)	4	6.3	58	5-6	3	(6)
1-6188	(3-8)	2	6.3	48	4-5	7	(4)
2-6188	(6-8)	2	6.3	48	1-2	7	(1)
1-6189	(4-5-8)	4	6.3	62	1	9	(2)
2-6189	(3-4-5)	4	6.3	62	6	9	(7)
6197	(2-5-9)	4	6.3	36	3-6-8	4	
1-6201	(4-5-8)	4	6.3	84	1	9	(2)
2-6201	(3-4-5)	4	6.3	84	6	9	(7)
1-6202	(4)	4	6.3	28	6	3	
2-6202	(4)	4	6.3	28	1	3	
1-6203	(5)	3	6.3	42	1	4	
2-6203	(5)	3	6.3	42	9	4	
1-6211	(5-9)	4	6.3	60	1	4	(2)
2-6211	(4-9)	4	6.3	60	6	5	(7)
6216	(3-5-8)	4	6.3	92	1-6-7	4	(2)
6227	(1-5-6)	4	6.3	38	7-8	4	(8)
6265	(4)	1	6.3	36	1-5	3	(1)
6267	(2-5-7)	4	6.3	26	6-9	4	(9)
1-6350	(7-9)	4	6.3	44	1	4-5	(3)
2-6350	(2-9)	4	6.3	44	6	4-5	(8)
1-6360	(4-5)	4	6.3	26	3-8	9	(3)
2-6360	(4-5)	4	6.3	26	1-6	9	(1)
6374	(5)	3	6.3	32	0	4	
1-6386	(8-9)	4	6.3	48	4	1	(3)
2-6386	(2-9)	4	6.3	46	6	1	(7)
6417	(5-8-9)	4	12.6	40	1-6	4	(6)
1-6463	(7-9)	4	6.3	44	1	4-5	(3)
2-6463	(2-9)	4	6.3	44	6	4-5	(8)
6485	(4)	4	6.3	47	5-6	4	(1)
1-6507	(6-8)	2	6.3	46	1-2	7	(1)
2-6507	(3-8)	2	6.3	46	4-5	7	(4)
6516	(4)	4	6.3	46	5-7	3	(7)
6550	(7)	4	6.3	52	3-4	2	(4)
6574	(7)	4	6.3	24	3-6	1	
6626	(2-4-7)	4	Off	48	1-5		

TUBE		A	B	C	U	D	
6627	(2-4-7)	4	0.63	50	1-5	Gas Test	
6660	(4)	4	6.3	50	5-6	3	(6)
6661	(4)	1	6.3	36	1-5	3	(1)
6662	(4)	4	6.3	57	5-6	3	(6)
1-6663	(1-4)	1	6.3	40	2	3	
2-6663	(4-5)	1	6.3	40	7	3	
6664	(4)	4	6.3	80	1	3	(6)
6669	(1-4-7)	4	6.3	40	5-6	3	(6)
6676	(4)	4	6.3	56	5-6	3	
6677	(2-5-9)	4	6.3	38	3-6-8	4	
1-6678	(5-8)	4	6.3	62	3-6	4	(3)
2-6678	(5-7)	4	6.3	56	1	4	(9)
1-6679	(4-5-8)	4	6.3	84	1	9	(2)
2-6679	(3-4-5)	4	6.3	84	6	9	(7)
1-6680	(4-5-8)	4	6.3	62	1	9	(2)
2-6680	(3-4-5)	4	6.3	62	6	9	(7)
1-6681	(4-5-8)	2	6.3	44	1-2	9	(2)
2-6681	(3-4-5)	2	6.3	44	6-7	9	(7)
6686	(1-5-6)	4	6.3	46	7-8	4	(8)
1-6687	(4)	4	6.3	42	5-6	3	(6)
2-6687	(4)	4	6.3	26	1-6	3	
6688	(1-3-5)	4	6.3	40	7-9	4	(9)
6689	(1-5-6)	4	6.3	46	7-8	4	(8)
6842	(1-3-5-6-7)	1	6.3	46	4-0	2	(4)
6883	(1-4-6-7)	4	12.6	30	3-0	2	(3)
6888	(7)	4	6.3	36	6-8	2	(6)
1-6922	(5-8)	4	6.3	42	1	4	(2)
2-6922	(3-5)	4	6.3	42	6	4	(7)
6968	(2-4-7)	4	6.3	52	5-6	3	(1)
7000	(7)	4	6.3	94	3-4	2	(4)
1-7025	(4-5-8)	2	6.3	42	1-2	9	(2)
2-7025	(3-4-5)	2	6.3	42	6-7	9	(7)
7027	(5-6-7)	4	6.3	37	1-3-4	2	
7034	(2-4-6-7-8)	4	6.3	30	1-5-0	3	
1-7044	(6-8)	4	6.3	38	1	4-5	(2)
2-7044	(3-8)	4	6.3	38	9	4-5	(7)
7054	(3-5-9)	4	12.6	50	7-8	4	(8)
1-7055	(1-4)	1	12.6	66	2	3	
2-7055	(4-5)	1	12.6	66	7	3	
7056	(4)	4	12.6	48	5-6	3	(6)
1-7057	(5-8)	4	12.6	66	1	4	(2)
2-7057	(3-5)	4	12.6	66	6	4	(7)
1-7058	(5-9)	2	12.6	60	1-2	4	(2)
2-7058	(4-9)	2	12.6	60	6-7	5	(7)
1-7059	(5-7)	2	12.6	42	1-9	4	(9)
2-7059	(5-8)	4	12.6	57	3-6	4	(2)
1-7060	(5-9)	4	12.6	74	1	4	(2)
2-7060	(3-5)	4	12.6	44	6-7	4	(8)
7061	(3-5-6)	4	12.6	43	1-8-9	4	
1-7062	(4-5-8)	4	6.3	60	1	9	(2)
2-7062	(3-4-5)	4	6.3	60	6	9	(7)

TUBE		A	B	C	U	D	
1-7119	(4-5-6)	4	6.3	36	1	8	(2)
2-7119	(3-4-5)	4	6.3	36	9	8	(7)
7167	(2-4-7)	4	12.6	86	5-6	3	(6)
7189	(1-2-5)	4	6.3	38	7-9	4	(9)
7193	(7)	2	6.3	42	0	2	
		Tie Both Top Caps Together.					
7212	(1-4-6-7)	4	6.3	30	3-0	2	(3)
1-7244	(4)	4	6.3	58	2	3	(5)
2-7244	(4)	4	6.3	52	1	3	(6)
7245	(1-4-5-6)	4	6.3	56	7	3	
1-7247	(4-5-8)	4	6.3	78	1	9	(2)
2-7247	(3-4-5)	2	6.3	46	6-7	9	(7)
1-7258	(5-9)	4	12.6	56	1	4	(2)
2-7258	(3-5)	4	12.6	54	6-7	4	(7)
1-7316	(4-5-8)	4	6.3	62	1	9	(2)
2-7316	(3-4-5)	4	6.3	62	6	9	(7)
7355	(7)	4	6.3	34	3-8	2	(8)
7360	(5)	4	6.3	70	2-6	4	(3)
7408	(7)	4	6.3	40	3-4	2	(4)
7543	(4)	4	6.3	74	5-6	3	(6)
7551	(1-5-9)	4	12.6	36	3-6-8	4	
7558	(1-5-9)	4	6.3	37	3-6-8	4	
7581	(7)	4	6.3	36	3-4	2	(4)
7586	(5)	1	6.3	100	1	4	(2)
7587	(5)	1	6.3	72	0	3-4	(1)
1-7643	((5-8)	4	6.3	66	3-6	4	(3)
2-7643	(5-7)	4	6.3	48	1	4	
1-7687	(5-7)	4	6.3	54	1	4	
2-7687	(5-8)	4	6.3	54	3-6	4	(3)
7693	(4)	1	6.3	36	1-5	3	(1)
7695	(5)	4	50	30	1-9	4	(6)
7700	(6)	4	6.3	90	2-3-4	1	(0)
7717	(2-4-7)	4	6.3	48	5-6	3	(6)
1-7724	(1-5-7)	1	12.6	66	2	3	
2-7724	(3-5-7)	1	12.6	66	6	3	
3-7724	(1-3-5)	2	12.6	62	8-9	3	(8)
1-7734	(5-7)	4	6.3	32	6	4	
2-7734	(2-5)	4	6.3	100	1-9	4	(1)
7754	(5)	4	6.3	28	1-9	4	(1)
7756	(8)	4	6.3	34	3-5	6	(5)
1-7803	(5-8)	4	6.3	41	1	4	(2)
2-7803	(3-5)	4	6.3	41	6	4	(7)
7867	(7)	2	6.3	55	8-0	2	(5)
7895	(5)	1	6.3	50	1-2	4	(2)
1-7898	(8-9)	4	6.3	86	1	4-5	(2)
2-7898	(3-9)	4	6.3	86	6	4-5	(7)
7905	(1-9)	4	3	34	3-6-8	4-5	
7984	(2-6-8-9)	2	12.6	88	1-3-4-5-7	—	(0)
8016	(7)	4	1.4	68	0	2	
8020	(4)	4	6.3	40	0	1	
8058	(1-2-3-5)	1	6.3	40	0	4	
		Connect base ring and top cap together					

TUBE		A	B	C	U	D	
8077	(3-5-9)	4	12.6	50	7-8	4	(8)
8084	(4)	4	12.6	47	5-6	3	(1)
8106	(2-5-6-9)	4	12.6	40	1-3-8	4	(7)
8113	(2-4-7)	4	6.3	45	5-6	3	(1)
8149	(1-2-3-9)	2	6.3	90	4-5-6-7-8	—	(0)
8150	(1-2-4-6-9)	4	6.3	34	5-8	—	
8156	(2-6-8-9)	4	12.6	32	1-3-5-7	—	—
8298	(1-4-6-7)	4	6.3	30	3-0	2	(3)
8417	(7)	4	6.3	32	3-4	2	(4)
9001	(2-4-7)	1	6.3	45	1-5	3	(1)
9002	(2-4-7)	4	6.3	82	1-5	3	(6)
9003	(2-4-7)	2	6.3	46	1-5	3	(1)
9006	(2-4-7)	2	6.3	72	1-5	3	
AG5209	(2-4-7)	4	Off	34	1-3-5	Gas Test	
AG5210	(2-4-7)	4	0.63	50	1-5	Gas Test	
AG5211	(2-4-7)	4	Off	48	1-5	—	
1-AZ31	(8)	3	4.2	52	4	2	
2-AZ31	(8)	3	4.2	54	6	2	
1-B36	(6-8)	4	12.6	78	2	7	(1)
2-B36	(3-8)	4	12.6	78	5	7	
1-B65	(6-8)	4	6.3	72	2	7	(1)
2-B65	(3-8)	4	6.3	72	5	7	(4)
1-B152	(4-5-8)	4	6.3	84	1	9	(2)
2-B152	(3-4-5)	4	6.3	84	6	9	(7)
1-B309	(4-5-8)	4	6.3	84	1	9	(2)
2-B309	(3-4-5)	4	6.3	84	6	9	(7)
1-B329	(4-5-8)	4	6.3	62	1	9	(2)
2-B329	(3-4-5)	4	6.3	62	6	9	(7)
1-B339	(4-5-8)	2	6.3	44	1-2	9	(2)
2-B339	(3-4-5)	2	6.3	44	6-7	9	(7)
BPM04	(1-4-7)	4	6.3	40	5-6	3	(6)
BR	(2-3)	4	Off	38	4		
C1B	(4)	4	3	26	0	1	
1-CCa	(5-8)	4	6.3	42	1	4	(2)
2-CCa	(3-5)	4	6.3	42	6	4	(7)
1-CCH35	(7)	4	7.5	62	3-4	2	(4)
2-CCH35	(7)	4	7.5	80	6	2	(5)
CL33	(7)	4	32	34	3-4	2	(4)
CY31	(7)	3	19.6	54	5	2	
1-D2M9	(1-4)	1	6.3	40	2	3	
2-D2M9	(4-5)	1	6.3	40	7	3	
1-D77	(1-4)	1	6.3	40	2	3	
2-D77	(4-5)	1	6.3	40	7	3	
1-D152	(1-4)	1	6.3	40	2	3	
2-D152	(4-5)	1	6.3	40	7	3	
DA90	(1-5)	1	1.4	90	2-6	7	
1-DAC32	(7)	1	1.4	40	3-0	2	(0)
2-DAC32	(7)	1	1.4	100	5	2	
1-DAF91	(7)	4	1.4	30	5-6	1	(6)
2-DAF91	(7)	1	1.4	92	3	1	
1-DAF92	(7)	1	1.4	45	2-6	1	(6)
2-DAF92	(7)	1	1.4	100	4	1	
1-DAF96	(7)	4	1.4	30	5-6	1	(6)
2-DAF96	(7)	1	1.4	100	3	1	
1-DCC90	(1-7)	4	1.4	64	2	4	
2-DCC90	(1-7)	4	1.4	64	6	4	
DCG4/1000G	(4)	4	3	26	0	1	
DF33	(7)	1	1.4	42	3-0	2	(0)
DF91	(1-5)	4	1.4	76	2-3	7	(3)
DF92	(1-5)	4	1.4	76	2-3	7	(3)
DF96	(1-5)	2	1.4	50	2-6	7	(6)
DF97	(1-5)	4	1.4	100	2-3	7	(3)
DF904	(1-5)	2	1.4	42	2-6	7	(6)
1-DH63	(7)	2	6.3	48	3-0	2	(0)
2-DH63	(7)	1	6.3	66	5	2-8	
3-DH63	(7)	1	6.3	68	4	2-8	
1-DH77	(4)	2	6.3	42	1-7	3	(1)
2-DH77	(4)	1	6.3	56	5	2-3	
3-DH77	(4)	1	6.3	70	6	2-3	
1-DH719	(3-5)	1	6.3	42	1	4	
2-DH718	(5-7)	1	6.3	42	2	4	
3-DH719	(3-5)	2	6.3	46	8-9	4	(8)
4-DH719	(3-5)	1	6.3	64	6	4-7	
1-DK32	(7)	4	1.4	50	3-4-0	2	(4)
2-DK32	(7)	4	1.4	54	4-0	2	
1-DK91	(1-5)	4	1.4	50	2-3	7	(3)
2-DK91	(1-5)	4	1.4	50	3	7	
DK92	(7)	1	1.4	38	2-4	1	(4)
DK96	(7)	4	1.4	54	2-3	1	(3)
DL33	(2-7)	4	1.4	44	3-4	8	(4)
DL35	(7)	4	1.4	38	3-4	2	(4)
DL91	(1-5)	1	1.4	70	2-4-6	7	(4)
DL92	(1-7)	2	1.4	46	2-3-6	5	(3)
DL93	(1-7)	4	1.4	38	2-3-6	5	(3)
DL94	(1-7)	2	1.4	43	2-6	5	(6)
DL95	(1-7)	4	1.4	40	2-4-6	5	(4)
DL96	(1-7)	4	1.4	44	2-3	5	(3)
DL98	(4-5)	4	1.4	36	1-7	2-6	(1)
DP61	(2-4-7)	4	6.3	52	5-6	3	(6)
DY80	(1-4-6-9)	4	1.4	74	0	2-5-8	
DY87	(1-4-6-9)	4	2	66	0	2-5-8	
1-E80CC	(4-5-8)	4	6.3	90	1	9	(2)
2-E80CC	(3-4-5)	4	6.3	90	6	9	(7)
1-E80CF	(5-8)	4	6.3	66	3-6	4	(3)
2-E80CF	(5-7)	4	6.3	48	1	4	
E80F	(2-5-7)	4	6.3	76	1-6	4	(1)
E80L	(1-5-6)	4	6.3	38	7-8	4	(8)
1-E81CC	(4-5-8)	4	6.3	84	1	9	(2)
2-E81CC	(3-4-5)	4	6.3	84	6	9	(7)
E81L	(1-5-6)	4	6.3	46	7-8	4	(8)
E83F	(1-5-6)	4	6.3	46	7-8	4	(8)
1-E88CC	(5-8)	4	6.3	42	1	4	(2)
2-E88CC	(3-5)	4	6.3	42	6	4	(7)
1-E90CC	(4)	4	6.3	48	1	3	(6)
2-E90CC	(4)	4	6.3	48	2	3	(5)
E90F	(4)	1	6.3	36	1-5	3	(1)
1-E91AA	(1-4)	1	6.3	40	2	3	
2-E91AA	(4-5)	1	6.3	40	7	3	
1-E91H	(4)	4	6.3	42	5-6	3	(6)
2-E91H	(4)	4	6.3	26	1-6	3	
1-E92CC	(4)	4	6.3	66	2	3	(5)
2-E92CC	(4)	4	6.3	66	1	3	(6)
E95F	(2-4-7)	4	6.3	52	5-6	3	(6)
1-E180CC	(4-5-8)	4	6.3	60	1	9	(2)
2-E180CC	(3-4-5)	4	6.3	60	6	9	(7)
E180F	(1-3-5)	4	6.3	40	7-9	4	(9)
1-E182CC	(4-5-6)	4	6.3	36	1	8	(2)
2-E182CC	(3-4-5)	4	6.3	36	9	8	(7)
E1148	(7)	4	6.3	26	0	2	
		Tie Both Top Caps Together					
1-EAA91	(1-4)	1	6.3	40	2	3	
2-EAA91	(4-5)	1	6.3	40	7	3	
1-EAA901S	(1-4)	1	6.3	40	2	3	
2-EAA901S	(4-5)	1	6.3	40	7	3	
1-EABC80	(3-5)	1	6.3	42	1	4	
2-EABC80	(5-7)	1	6.3	42	2	4	
3-EABC80	(3-5)	2	6.3	46	8-9	4	(8)
4-EABC80	(3-5)	1	6.3	64	6	4-7	
1-EAC91	(2-4)	4	6.3	96	7	3	(6)
2-EAC91	(4-5)	2	6.3	40	1	3	
1-EB34	(7-8)	3	6.3	62	3	2	
2-EB34	(4-7)	3	6.3	62	5	2	
1-EB91	(1-4)	1	6.3	40	2	3	
2-EB91	(4-5)	1	6.3	40	7	3	
1-EBC33	(7)	4	6.3	100	3	2	(0)
2-EBC33	(7)	1	6.3	60	4	2	
3-EBC33	(7)	1	6.3	48	5	2	
1-EBC81	(5-7-9)	2	6.3	45	1-2	4	(2)
2-EBC81	(5-7-9)	1	6.3	66	6	3-4	
3-EBC81	(5-7-9)	1	6.3	100	8	3-4	
1-EBC90	(4)	2	6.3	42	1-7	3	(1)
2-EBC90	(4)	1	6.3	42	5	2-3	
3-EBC90	(4)	1	6.3	70	6	2-3	
1-EBC91	(4)	1	6.3	44	1-7	3	(1)
2-EBC91	(4)	1	6.3	67	5	3	
3-EBC91	(4)	1	6.3	100	6	3	
1-EBF80	(5)	4	6.3	56	1-6	4	(1)
2-EBF80	(5)	1	6.3	64	7	3-4	
3-EBF80	(5)	1	6.3	52	8	3-4	
1-EBF83	(5)	4	6.3	24	2-6	4	(2)
2-EBF83	(5)	1	6.3	74	8	3-4	
3-EBF83	(5)	1	6.3	56	7	3-4	
1-EBF89	(5)	4	6.3	56	1-6	4	(1)
2-EBF89	(5)	1	6.3	100	7	4	
3-EBF89	(5)	1	6.3	100	8	4	
1-EBL31	(7)	4	6.3	40	3-6	2	(0)
2-EBL31	(7)	1	6.3	70	5	2	
3-EBL31	(7)	1	6.3	52	4	2	
EC80	(1-2-5-7-8)	4	6.3	64	9	4	
EC81	(5)	4	6.3	48	8	4	

TUBE		A	B	C	U	D	
EC86	(2-3-5-6-7-8)	4	6.3	59	1-9	4	
EC88	(1-3-5-6-7-9)	4	6.3	52	8	4	
EC90	(4)	4	6.3	66	1-5	3	(6)
EC91	(1-2-4-5-6)	4	6.3	80	7	3	
EC92	(4)	4	6.3	80	1	3	(6)
EC95	(1-4-7)	4	6.3	66	5	3	(2)
EC97	(1-4-7)	4	6.3	50	5	3	(2)
EC900	(2-4-7)	4	6.3	53	5	3	(1)
1-ECC32	(6-8)	4	6.3	100	2	7	(1)
2-ECC32	(3-8)	4	6.3	100	5	7	(4)
1-ECC33	(6-8)	4	6.3	76	2	7	(1)
2-ECC33	(3-8)	4	6.3	84	5	7	(4)
1-ECC34	(6-8)	4	6.3	48	2	7	
2-ECC34	(3-8)	4	6.3	48	5	7	
1-ECC35	(6-8)	2	6.3	48	1-2	7	(1)
2-ECC35	(3-8)	2	6.3	48	4-5	7	(4)
1-ECC81	(4-5-8)	4	6.3	84	1	9	(2)
2-ECC81	(3-4-5)	4	6.3	84	6	9	(7)
1-ECC82	(4-5-8)	4	6.3	62	1	9	(2)
2-ECC82	(3-4-5)	4	6.3	62	6	9	(7)
1-ECC83	(4-5-8)	2	6.3	44	1-2	9	(2)
2-ECC83	(3-4-5)	2	6.3	44	6-7	9	(7)
1-ECC84	(5-7-8)	4	6.3	50	3	4	(2)
2-ECC84	(1-5-8)	4	6.3	50	9	4	(6)
1-ECC85	(5-8)	4	6.3	84	1	4	(2)
2-ECC85	(3-5)	4	6.3	84	6	4	(7)
1-ECC86	(3-5)	2	6.3	100	6	4	(7)
2-ECC86	(5-8)	2	6.3	100	1	4	(2)
1-ECC88	(5-8)	4	6.3	40	1	4	(2)
2-ECC88	(3-5)	4	6.3	40	6	4	(7)
1-ECC91	(4)	4	6.3	64	1	3	(6)
2-ECC91	(4)	4	6.3	60	2	3	(5)
1-ECC180	(5-8)	4	6.3	64	1	4	(2)
2-ECC180	(3-5)	4	6.3	56	6	4	(7)
1-ECC186	(4-5-8)	4	6.3	62	1	9	(2)
2-ECC186	(3-4-5)	4	6.3	62	6	9	(7)
1-ECC189	(5-8)	4	6.3	42	1	4	(2)
2-ECC189	(3-5)	4	6.3	42	6	4	(7)
1-ECC801S	(4-5-8)	4	6.3	84	1	9	(2)
2-ECC801S	(3-4-5)	4	6.3	84	6	9	(7)
1-ECC802S	(4-5-8)	4	6.3	62	1	9	(2)
2-ECC802S	(3-4-5)	4	6.3	62	6	9	(7)
1-ECC960	(4)	4	6.3	48	1	3	(6)
2-ECC960	(4)	4	6.3	48	2	3	(5)
1-ECC962	(4)	4	6.3	66	2	3	(5)
2-ECC962	(4)	4	6.3	66	1	3	(6)
1-ECF80	(5-8)	4	6.3	62	3-6	4	(3)
2-ECF80	(5-7)	4	6.3	50	1	4	(9)
1-ECF82	(5-8)	4	6.3	62	3-6	4	(3)
2-ECF82	(5-7)	4	6.3	56	1	4	(9)
1-ECF801	(1-3-5)	1	6.3	80	6-7	4	(2)
2-ECF801	(1-3-5)	1	6.3	90	8	4	(9)
1-ECH35	(7)	4	6.3	60	3-4	2	(4)
2-ECH35	(7)	4	6.3	74	6	2	(5)

TUBE		A	B	C	U	D	
1-ECH81	(5)	4	6.3	66	1-6	4	(1)
2-ECH81	(5)	2	6.3	44	8-9	4	(9)
1-ECH83	(5)	4	6.3	48	1-6	4	(1)
2-ECH83	(5)	4	6.3	60	8	4	
1-ECL80	(5)	4	6.3	50	6-8	4	(8)
2-ECL80	(5)	2	6.3	45	1-2	4	(2)
1-ECL82	(5-8)	4	6.3	30	6-7	4	(7)
2-ECL82	(2-5)	4	6.3	26	1-9	4	(1)
1-ECL83	(3-5)	4	6.3	40	6-8	4	(8)
2-ECL83	(5-7)	4	6.3	26	1-2	4	(2)
1-ECL84	(3-5)	4	6.3	51	6-9	4	(8)
2-ECL84	(5-7)	2	6.3	38	1-2	4	(1)
1-ECL85	(5-8)	4	6.3	78	1	4	(2)
2-ECL85	(3-5)	2	6.3	84	6-7	4	(9)
1-ECL86	(2-5)	4	6.3	40	3-6	4	(3)
2-ECL86	(5-7)	2	6.3	42	1-9	4	(1)
1-ED2	(1-4)	1	6.3	40	2	3	
2-ED2	(4-5)	1	6.3	40	7	3	
EF22	(8)	4	7.5	50	2-3	1	(3)
EF36	(7)	4	6.3	75	3-4	2	(0)
EF37	(7)	1	6.3	75	3-4	2	(0)
EF39	(7)	4	6.3	56	3-4	2	(4)
EF80	(1-3-5)	4	6.3	50	7-8	4	(8)
EF85	(1-3-5)	4	6.3	46	7-8	4	(8)
EF86	(2-5-7)	4	6.3	26	6-9	4	(9)
EF89	(1-5-6)	4	6.3	48	7-8	4	(8)
EF91	(4)	4	6.3	90	5-7	3	(7)
EF92	(4)	4	6.3	100	5-7	3	(7)
EF93	(4)	4	6.3	50	5-6	3	(6)
EF94	(4)	4	6.3	54	5-6	3	(6)
EF95	(2-4-7)	4	6.3	52	5-6	3	(6)
EF96	(2-4-7)	4	6.3	64	5-6	3	(6)
EF98	(4)	2	6.3	65	5-6	3	(6)
EF183	(1-3-5)	4	6.3	32	7-8	4	(8)
EF184	(1-3-5)	4	6.3	40	7-8	4	(8)
EF861	(1-3-5)	4	6.3	40	7-9	4	(9)
1-EH90	(4)	4	6.3	48	6	3	
2-EH90	(4)	4	6.3	46	5-6	3	(6)
1-EH900S	(4)	4	6.3	42	5-6	3	(6)
2-EH900S	(4)	4	6.3	26	1-6	3	
1-EK90	(4)	4	6.3	48	6	3	
2-EK90	(4)	4	6.3	46	5-6	3	(6)
EL31	(7)	4	6.3	32	4-0	2	
EL32	(7)	4	6.3	40	3-4	2	
EL33	(7)	4	6.3	34	3-4	2	(4)
EL34	(7)	4	6.3	32	3-4	2	(4)
EL36	(1-3-4-7-8)	4	6.3	26	5-0	2	(5)
EL37	(7)	4	6.3	30	3-4	2	(4)
EL38	(7)	4	6.3	34	4-0	2	(4)
EL81	(1-5-6-9)	4	6.3	30	7-8-0	4	
EL82	(5)	2	6.3	92	7-9	4	(2)
EL83	(5)	4	6.3	42	1-7	4	(1)

TUBE		A	B	C	U	D	
EL84	(1-2-5)	4	6.3	35	7-9	4	(9)
EL85	(1-2-5-6-8)	4	6.3	48	7-9	4	(9)
EL86	(1-2-5)	4	6.3	30	7-8-9	4	(9)
EL90	(1-4-7)	4	6.3	40	5-6	3	(6)
EL91	(4)	4	6.3	48	5-7	3	(7)
EL95	(1-4-7)	4	6.3	44	5-5	3	(6)
EL180	(3-4-5-9)	4	6.3	38	7-8	6	(8)
EL360	(3-7-8)	4	6.3	28	1-4-0	2	
EL500	(1-2-3-5-8)	4	6.3	28	6-7-0	4	
EL803	(5)	4	6.3	42	1-7	4	(1)
EL821	(5)	4	6.3	42	7-8	4	(8)
EL822	(5)	4	6.3	38	7-8	4	(8)
1-EM34	(7)	4	6.3	0	3-5-6	2 Eyes Closed	
2-EM34	(7)	4	6.3	0	5-6	2 Left Eye Open	
3-EM34	(7)	4	6.3	0	3-5	2 Right Eye Open	
1-EM80	(3-4-8-9)	1	6.3	50	1-7	5	(1)
2-EM80	(4)	4	6.3	0	3-7-8-9	5 Eye Open	
3-EM80	(4)	4	6.3	0	3-8-9	5 Eye Closed	
EM81	(3-5-8-9)	2	6.3	70	1-6	4	(1)
1-EM84	(2-5-6-8)	2	6.3	70	1-9	4	(1)
2-EM84	(5)	4	6.3	0	2-6-7-8-9	4 Eye Closed	
3-EM84	(5)	4	6.3	0	2-6-7-8-9	4	
		Eye opens as Selector Switch "7" is Pulled Down					
1-EM87	(2-5-6-8)	2	6.3	44	1-9	4	(1)
2-EM87	(5)	4	6.3	0	2-6-7-8	4 Eye Closed	
3-EM87	(5)	4	6.3	0	2-6-7-8	4	
		Eye Opens as Selector Switch "7" is Pulled Down					
EN32	(7)	4	6.3	24	3-6	1	
EN93	(4)	4	6.3	26	7	3	
1-EQ80	(3-5-8)	4	6.3	64	1-6	4	(1)
2-EQ80	(3-5-8)	4	6.3	66	1	4	(7)
EY80	(5)	3	6.3	28	9	4	
EY81	(5)	3	6.3	25	2-9	4-0	
EY84	(5)	3	6.3	32	0	4	
EY86	(1-4-6-9)	4	6.3	64	0	2-5-8	
EY88	(1-2-5)	3	6.3	28	3-6-7-8-9	4	
EY91	(4)	3	6.3	28	1-5	3	
1-EZ35	(7)	3	6.3	40	3	2	
2-EZ35	(7)	3	6.3	40	5	2	
1-EZ80	(5)	3	6.3	46	1	4	
2-EZ80	(5)	3	6.3	46	7	4	
1-EZ81	(5)	3	6.3	30	1	4	
2-EZ81	(5)	3	6.3	30	7	4	
1-EZ90	(4)	4	6.3	28	6	3	
2-EZ90	(4)	4	6.3	28	1	3	
FM1000	(8)	4	6.3	40	4-5	1	(5
G4	(5)	3	6.3	43	2	1	

TUBE		A	B	C	U	D	
G84	(4)	3	2.5	56	2	1	
1-GZ30	(8)	3	5	34	4	2	
2-GZ30	(8)	3	5	34	6	2	
1-GZ33	(8)	3	5	25	4	2	
2-GZ33	(8)	3	5	25	6	2	
1-GZ34	(8)	3	5	26	4	2	
2-GZ34	(8)	3	5	26	6	2	
H63	(7)	2	6.3	40	4-0	2	(0)
1-HAA91	(1-4)	1	12.6	40	2	3	
2-HAA91	(4-5)	1	12.6	40	7	3	
1-HABC80	(5-7)	1	19.6	30	2	3-4	
2-HABC80	(3-5)	2	19.6	100	8-9	4	
3-HABC80	(3-5)	1	19.6	30	6	4-7	
4-HABC80	(3-5)	1	19.6	30	1	4-7	
1-HBC90	(4)	2	12.6	62	1-7	3	(1)
2-HBC90	(4)	1	12.6	88	5	2-3	
3-HBC90	(4)	1	12.6	70	6	2-3	
1-HBC91	(4)	2	12.6	56	1-7	3	(1)
2-HBC91	(4)	1	12.6	56	5	2-3	
3-HBC91	(4)	1	12.6	56	6	2-3	
1-HCC85	(5-8)	4	19.6	74	1	4	(2)
2-HCC85	(3-5)	4	19.6	74	6	4	(7)
1-HD14	(7)	1	1.4	40	3-0	2	
2-HD14	(7)	1	1.4	100	5	2	
HF93	(4)	4	12.6	52	5-6	3	(6)
HF94	(4)	4	12.6	80	5-6	3	(6)
1-HK90	(4)	4	12.6	44	5-6	3	(6)
2-HK90	(4)	4	12.6	46	6	3	
HL92	(2-4-5)	4	50	34	6-7	3	(6)
HL94	(2-4-5)	4	32	26	7	1-3	
1-HM04	(4)	4	6.3	48	6	3	
2-HM04	(4)	4	6.3	46	5-6	3	(6)
HY40	(4)	4	6.3	100	0	1	
HY65	(7)	4	6.3	36	4-0	2	(4)
HY90	(4-6)	4	32	26	5	3	
KT61	(7)	4	6.3	34	3-4	2	(4)
KT63	(7)	4	6.3	34	3-4	2	(4)
KT66	(7)	4	6.3	34	3-4	2	(4)
KT77	(7)	4	6.3	32	3-4	2	(4)
KT88	(7)	4	6.3	30	3-4	2	(4)
KTZ63	(7)	2	6.3	54	3-0	2	(0)
L63	(7)	4	6.3	76	3	2	(5)
L77	(4)	4	6.3	66	1-5	3	(6)
LA	(5)	4	6.3	40	2-4	1	(4)
LC900	(2-4-7)	4	3	50	5	3	(1)
1-LCL84	(3-5)	4	7.5	51	6-9	4	(8)
2-LCL84	(5-7)	2	7.5	38	1-2	4	(1)
1-LN119	(5-8)	4	50	38	6-7	4	(7)
2-LN119	(2-5)	4	50	30	1-9	4	(1)
1-M8081	(4)	4	6.3	64	2	3	(5)
2-M8081	(4)	4	6.3	64	1	3	(6)
M8082	(4)	4	6.3	46	5-7	3	(7)
M8100	(2-4-7)	4	6.3	52	5-6	3	(6)
M8161	(4)	4	6.3	94	5-7	3	(7)
M8196	(4)	4	6.3	55	5-6	3	(6)
M8204	(4-5-7)	4	6.3	26	6	3	
1-M8212	(1-4)	1	6.3	40	2	3	
2-M8212	(4-5)	1	6.3	40	7	3	
M8223	(2-4-7)	4	Off	48	1-5	Gas Test	
M8224	(2-4-7)	4	0.63	50	1-5	Gas Test	
M8232	(1-4-5-6)	4	6.3	64	7	3	
M8245	(1-4-7)	4	6.3	40	5-6	3	(6)
N16	(2-7)	4	1.4	44	3-4	8	(4)
N17	(1-7)	2	1.4	46	2-3-6	5	(3)
N18	(1-7)	4	1.4	40	2-4-6	5	(4)
N19	(1-7)	2	1.4	43	2-6	5	(6)
N152	(1-5-6-9)	4	19.6	30	7-8-0	4	
N153	(5)	4	12.6	44	1-7	4	(1)
N154	(5)	4	19.6	32	7-9	4	(9)
N329	(5)	4	19.6	32	7-9	4	(9)
N359	(1-5-6-9)	4	19.6	30	7-8-0	4	
N709	(1-2-5)	4	6.3	35	7-9	4	(9)
N727	(1-4-7)	4	6.3	40	5-6	3	(6)
1-PABC80	(3-5)	2	7.5	46	8-9	4	(8)
2-PABC80	(3-5)	1	7.5	100	6	4	
3-PABC80	(3-5)	1	7.5	46	1	4	
4-PABC80	(5-7)	1	7.5	46	2	4	
PC900	(2-4-7)	4	4.2	51	5	3	(1)
1-PCC84	(1-5-7-8)	4	7.5	44	9	4	(6)
2-PCC84	(5-7-8)	4	7.5	40	3	4	(2)
1-PCC85	(3-5)	4	7.5	88	6	4	(7)
2-PCC85	(5-8)	4	7.5	100	1	4	(2)
1-PCC88	(5-8)	4	7.5	40	1	4	(2)
2-PCC88	(3-5)	4	7.5	40	6	4	(7)
1-PCC89	(1-5-7-8)	4	7.5	36	9	4	(6)
2-PCC89	(5-7-8)	4	7.5	30	3	4	(2)
1-PCF80	(5-8)	4	7.5	68	3-6	4	(3)
2-PCF80	(5-7)	4	7.5	46	1	4	(9)
1-PCF82	(5-8)	4	7.5	60	3-6	4	(3)
2-PCF82	(5-7)	4	7.5	62	1	4	(9)
1-PCF86	(1-3-5)	4	7.5	38	7	4	
2-PCF86	(1-3-5)	4	7.5	48	8-9	4	(2)
1-PCL82	(5-8)	4	19.6	32	6-7	4	(7)
2-PCL82	(2-5)	3	19.6	24	1-9	4	(1)
1-PCL83	(3-5)	4	12.6	36	6-8	4	(8)
2-PCL83	(5-7)	4	12.6	78	1	4	(2)
1-PCL84	(3-5)	4	12.6	56	6-9	4	(9)
2-PCL84	(5-7)	4	12.6	24	1-2	4	(1)
PL21	(4-5-7)	4	6.3	26	6	3	
PL36	(3-7-8)	4	25	30	1-4-0	2	(5)
PL38	(7)	4	32	36	4-0	2	(4)
PL81	(1-5-6-9)	4	19.6	30	7-8-0	4	
PL82	(5)	4	19.6	32	7-9	4	(9)
PL83	(5)	4	12.6	44	1-7	4	(1)
PL84	(1-2-5)	4	19.6	30	7-8-8	4	(9)
PL500	(1-2-3-5-8)	4	25	28	6-7-0	4	
PM04	(4)	4	6.3	50	5-6	3	(6)
PY32	(7)	3	32	20	3-5	2-8	
PY80	(5)	3	19.6	46	9	4	
PY81	(5)	3	19.6	50	2-9	4	
PY82	(5)	3	19.6	48	9	1	
QE03/10	(3-5-9)	4	6.3	40	1-6	4	(6)
QE06/50	(5)	4	6.3	36	2-0	1	(2)
1-QQE03/12	(4-5)	4	6.3	26	3-8	9	(3)
2-QQE03/12	(4-5)	4	6.3	26	1-6	9	(1)
1-QQV03-10	(4-5)	4	6.3	26	3-8	9	(3)
2-QQV03-10	(4-5)	4	6.3	26	1-6	9	(1)
QV06-20	(1-4-6-7)	4	6.3	30	3-0	2	(3)
1-R52	(8)	3	5	34	4	2	
2-R52	(8)	3	5	34	6	2	
RA-1	(4)	1	12.6	75	2-3	1	
1-RK34	(7)	4	6.3	64	0	1 Right Top Cap	
2-RK34	(7)	4	6.3	64	0	1 Left Top Cap	
1-RK60	(4)	4	6.3	26	0	1 Right Top Cap	
2-RK60	(4)	4	6.3	26	0	1 Left Top Cap	
RK75	(5)	4	5	70	4-0	1	(4)
RX233	(7)	3	2.5	36	0	2	
SR2	(2-4-7)	4	Off	34	1-3-5	Gas Test	
SR3	(2-4-7)	4	0.63	50	1-5	Gas Test	
STV85/10	(2-4-7)	4	Off	34	1-3-5	Gas Test	
STV108/30	(2-4-7)	4	0.63	50	1-5	Gas Test	
STV150/30	(2-4-7)	4	Off	48	1-5		
1-T2M05	(4)	4	6.3	64	1	3	(6)
2-T2M05	(4)	4	6.3	60	2	3	(5)
1-U50	(8)	3	5	48	6	2	
2-U50	(8)	3	5	31	4	2	
1-U52	(8)	3	5	36	4	2	
2-U52	(8)	3	5	36	6	2	
1-U78	(4)	4	6.3	28	6	3	
2-U78	(4)	4	6.3	28	1	3	
1-U147	(7)	3	6.3	40	3	2	
2-U147	(7)	3	6.3	40	5	2	
1-U149	(8)	3	6.3	43	3	1	
2-U149	(8)	3	6.3	43	6	1	
U153	(5)	3	19.6	50	2-9	4	
1-U709	(5)	3	6.3	30	1	4	
2-U709	(5)	3	6.3	30	7	4	
1-UABC80	(3-5)	1	32	30	1	4-7	
2-UABC80	(5-7)	1	32	30	2	3-4	
3-UABC80	(3-5)	4	32	28	8-9	4	(8)
4-UABC80	(3-5)	1	32	72	6	4-7	
1-UBC81	(5-7-9)	2	12.6	58	1-2	4	(2)
2-UBC81	(5-7-9)	1	12.6	100	6	3-4	
3-UBC81	(5-7-9)	1	12.6	64	8	3-4	

TUBE		A	B	C	U	D	
1-UBF80	(5)	4	19.6	52	1-6	4	(1)
2-UBF80	(5)	1	19.6	50	7	3-4	
3-UBF80	(5)	1	19.6	62	8	3-4	
1-UBL21	(8)	4	50	34	2-4	1	(4)
2-UBL21	(8)	1	50	100	5	1	
3-UBL21	(8)	1	50	100	6	1	
UC92	(4)	2	7.5	44	1-6	3	(6)
1-UCC84	(1-5-7-8)	4	19.6	50	9	4	(6)
2-UCC84	(5-7-8)	4	19.6	50	3	4	(2)
1-UCC85	(3-5)	4	2.5	88	6	4	(7)
2-UCC85	(5-8)	4	2.5	88	1	4	(2)
1-UCF80	(5-8)	4	25	68	3-6	4	(3)
2-UCF80	(5-7)	4	25	54	1	4	(9)
1-UCH81	(5)	4	19.6	58	1	4	
2-UCH81	(5)	4	19.6	54	1-6	4	(1)
3-UCH81	(5)	4	19.6	68	8	4	(9)
1-UCL82	(5-8)	4	50	38	6-7	4	(7)
2-UCL82	(2-5)	4	50	30	1-9	4	(1)
1-UCL83	(3-5)	4	32	40	6-8	4	(8)
2-UCL83	(5-7)	4	32	28	1-2	4	(2)
UF80	(1-3-5)	4	19.6	54	7-8	4	(8)
UF85	(1-3-5)	4	19.6	44	7-8	4	(8)
UF86	(2-5-7)	2	12.6	58	6-9	4	(9)
UF89	(1-5-6)	4	12.6	50	7-8	4	(8)
UL84	(1-2-5)	4	50	36	6-7-8-9	4	
1-UM4	(8)	4	12.6	0	4	1 Both Eyes Open	
2-UM4	(8)	4	12.6	0	3-4	1 Bottom Eye Closed	
3-UM4	(8)	4	12.6	0	4-6	1 Top Eye Closed	
1-UM80	(3-5-8-9)	2	19.6	100	1-7	4	(1)
2-UM80	(5)	4	19.6	0	3-7-8-9	4 Eye Open	
3-UM80	(5)	4	19.6	0	3-8-9	4 Eye Closed	
1-UU12	(5)	3	6.3	30	1	4	
2-UU12	(5)	3	6.3	30	7	4	
UY85	(5)	4	32	28	1-6-9	4	
1-V2M70	(4)	4	6.3	28	6	3	
2-V2M70	(4)	4	6.3	28	1	3	
VR75	(3-7)	4	0.63	50	5	Gas Test	
VR90	(3-7)	4	Off	40	5	Gas Test	
VR105	(3-7)	4	0.63	40	5	Gas Test	
VR150	(3-7)	4	Off	30	5	Gas Test	
VT24	(4)	2	1.4	62	2-3	1	(3)
VT25	(4)	4	7.5	50	2	1	
VT26	(4)	4	3	80	2-3	1	(3)
VT27	(4)	2	2	46	2-3	1	(3)
VT28	(5)	4	2.5	78	2-3	1	(3)
VT29	(5)	2	2.5	52	2-3	1	(3)
VT30	(4)	5	5	65	2	1	
VT31	(4)	2	2	52	2-3	1	(3)
VT33	(5)	4	2	40	2-4	1	(4)
VT35	(5)	4	2.5	56	2-3	1	(3)
VT36	(5)	4	6.3	74	2-3	1	(3)
VT37	(5)	4	6.3	54	2-3	1	(3)
VT38	(5)	4	6.3	48	2-3	1	(3)
VT40	(4)	2	5	48	2-3	1	(3)
VT44	(4)	4	2	78	2-3	1	(3)
VT45	(4)	4	2.5	38	2	1	
VT46A	(4)	4	3	26	0	1	
VT47	(5)	4	2.5	40	2-4	1	(4)
VT48	(6)	4	6.3	44	2-3	1	(3)
VT49	(5)	4	6.3	64	2-3	1	(3)
VT50	(4)	4	7.5	36	2	1	
VT51	(4)	4	7.5	28	2-3	1	(3)
VT52	(4)	4	5	38	2	1	
VT54	(4)	4	2	62	2-3	1	(3)
VT55	(4)	4	7.5	44	1-0	1	(3)
VT56	(5)	2	2.5	42	2-3	1	(3)
VT57	(6)	4	2.5	92	2-3	1	(3)
VT58	(6)	4	2.5	54	2-3	1	(3)
VT62	(4)	4	7.5	60	2	1	
VT63	(5)	4	2.5	36	2-4	1	(4)
VT64	(4)	4	7.5	28	0	1	
		Tie Both Top Caps Together					
VT65	(7)	4	6.3	82	3	2	(5)
VT66	(7)	4	6.3	46	3-4	2	(4)
1-VT68	(7)	4	6.3	70	2-3	1	(3)
2-VT68	(7)	1	6.3	68	4	1-6	
3-VT68	(7)	1	6.3	68	5	1-6	
VT69	(6)	4	6.3	60	2-3	1	(3)
1-VT70	(7)	2	6.3	78	2-0	1	
2-VT70	(7)	1	6.3	90	4-5	1	(5)
VT73	(5)	4	2.5	62	2	1	
1-VT74	(8)	3	5	34	4	2	
2-VT74	(8)	3	5	34	6	2	
1-VT75	(6)	2	6.3	46	2-0	1	(0)
2-VT75	(6)	1	6.3	90	3	1	
3-VT75	(6)	1	6.3	90	4	1	
VT76	(5)	2	6.3	50	2-3	1	(3)
VT77	(6)	4	6.3	88	2-3	1	(3)
VT78	(6)	4	6.3	60	2-3	1	(3)
1-VT80	(4)	3	5	48	2	1	(3)
2-VT80	(4)	3	5	54	3	1	
1-VT83	(4)	4	6.3	26	2	1	
2-VT83	(4)	4	6.3	26	2	1	
VT84	(5)	3	6.3	43	2	1	
VT86	(7)	2	6.3	60	3-0	2	
1-VT87	(7)	4	6.3	26	0-4	2	
2-VT87	(7)	4	6.3	28	3-0	2	
1-VT88	(7)	2	6.3	46	3-0	2	
2-VT88	(7)	1	6.3	68	4	2-8	
3-VT88	(7)	1	6.3	68	5	2-8	
VT89	(6)	4	6.3	46	2-3	1	(3)
1-VT90	(7-8)	3	6.3	62	3	2	
2-VT90	(4-7)	3	6.3	62	5	2	
VT91	(7)	2	6.3	54	3-0	2	
1-VT92	(7)	2	6.3	48	3-0	2	
2-VT92	(7)	1	6.3	66	5	2-8	
3-VT92	(7)	1	6.3	68	4	2-8	
1-VT93	(7)	1	6.3	50	5	2-8 Good=40	
2-VT93	(7)	1	6.3	50	4	2-8 Good=40	
3-VT93	(7)	4	6.3	84	3-6	2	(6)
VT94	(7)	4	6.3	76	3	2	(5)
VT95	(4)	4	2.5	30	2	1	
1-VT96	(7)	4	6.3	27	3-4	2	(4)
2-VT96	(7)	4	6.3	27	5-6	2	(5)
1-VT97	(8)	3	5	58	4	2	
2-VT97	(8)	3	5	58	6	2	
1-VT98	(6)	4	6.3	50	2-4	1 Eye Closed	
2-VT98	(6)	4	6.3	50	4	1 Eye Open	
1-VT99	(7-8)	4	6.3	72	3	2	
2-VT99	(4-7)	4	6.3	72	6	2	(5)
VT100	(5)	4	6.3	36	2-0	1	(2)
VT101	(7)	4	12.6	38	3-0	1	(3)
1-VT103	(8)	2	6.3	50	2-6	7	(2)
2-VT103	(8)	1	6.3	78	4	3-7	
3-VT103	(8)	1	6.3	78	5	3-7	
1-VT104	(8)	2	12.6	62	2-6	7	(3)
2-VT104	(8)	1	12.6	56	4	3-7	
3-VT104	(8)	1	12.6	48	5	3-7	
1-VT105	(8)	2	6.3	50	2-3	7	(3)
2-VT105	(8)	2	6.3	50	4-5	7	(4)
VT107	(7)	4	6.3	42	3-4	2	(4)
VT109	(7)	4	6.3	26	3-6	2	(5)
VT112	(7)	4	6.3	56	6-8	2	(6)
1-VT114	(8)	3	5	34	4	2	
2-VT114	(8)	3	5	34	6	2	
VT115	(7)	4	6.3	36	3-4	2	(4)
VT116	(7)	4	6.3	66	6-8	2	(6)
VT117	(7)	4	6.3	52	6-8	2	(6)
VT119	(4)	4	2.5	56	0	1	
VT124	(7)	4	1.4	60	3-4	2	(4)
VT125	(7)	4	1.4	38	3-4	2	(4)
1-VT126	(7)	3	6.3	40	3	2	
2-VT126	(7)	3	6.3	40	5	2	
VT131	(7)	4	12.6	52	6-8	2	(6)
1-VT133	(8)	4	12.6	82	6	7	(2)
2-VT133	(8)	1	12.6	100	4	3-7	
3-VT133	(8)	1	12.6	70	5	3-7	
VT134	(7)	4	12.6	52	3-4	2	(4)
VT135	(7)	4	12.6	66	3	2	(5)
VT136	(7)	4	12.6	36	3-0	1	(3)

TUBE		A	B	C	U	D	
VT137	(7)	2	12.6	66	3-5	2	(5)
1-VT138	(7)	4	12.6	30	3-4	2 Eye Closed	
2-VT138	(7)	4	12.6	30	4	2 Eye Open	
VT139	(3-7)	4	Off	30	5	Gas Test	
1-VT145	(4)	3	5	34	2	1	
2-VT145	(4)	3	5	34	3	1	
VT146	(7)	1	1.4	42	3-0	2	(0)
1-VT147	(7)	4	1.4	50	3-4-0	2	(4)
2-VT147	(7)	4	1.4	54	4-0	2	
1-VT148	(7)	2	1.4	52	3-5	2	(5)
2-VT148	(7)	2	1.4	54	6-0	2	
3-VT148	(7)	1	1.4	96	8	2	
1-VT149	(2-7)	1	1.4	42	3-0	1	
2-VT149	(2-7)	1	1.4	44	5-6	1	(5)
3-VT149	(2-7)	1	1.4	78	8	1	
1-VT150	(7)	4	6.3	45	4	2	
2-VT150	(7)	4	6.3	44	3-4	2	(4)
1-VT151	(7-0)	4	6.3	50	1-3-4-0	2	
2-VT151	(1-7-0)	1	6.3	50	5-6	2	(5)
VT152	(7)	4	6.3	44	3-4	2	(4)
1-VT161	(7)	4	12.6	45	4	2	
2-VT161	(7)	4	12.6	44	3-4	2	(4)
VT162	(7)	4	12.6	66	6-8	2	(6)
1-VT163	(7-8)	2	6.3	54	3-0	2	
2-VT163	(4-7)	2	6.3	50	5-6	2	(5)
VT164	(7)	4	2.5	46	3-4	2	(4)
VT165	(5)	4	2.5	42	2-0	1	(2)
1-VT167	(7)	4	6.3	46	1-3-4-0	2	(4)
2-VT167	(7)	4	6.3	86	6	2	(5)
VT168	(7)	4	6.3	30	3-4	2	(4)
1-VT169	(7)	4	12.6	74	3-6	2	(6)
2-VT169	(7)	1	12.6	100	4	2-8	
3-VT169	(7)	1	12.6	100	5	2-8	
VT170	(7)	2	2	62	3-0	2	
1-VT171	(1-5)	4	1.4	50	2-3	7	(3)
2-VT171	(1-5)	4	1.4	50	3	7	
1-VT172	(7)	4	1.4	30	5-6	1	(6)
2-VT172	(7)	1	1.4	92	3	1	
VT173	(1-5)	4	1.4	76	2-3	7	(3)
VT174	(1-7)	2	1.4	46	2-3-6	5	(3)
VT175	(7)	4	6.3	48	3-4	2	(4)
VT176	(7)	4	6.3	74	6-8	2	(6)
1-VT177	(8)	1	1.4	44	2-6	1	(6)
2-VT177	(8)	1	1.4	100	4	1	
1-VT178	(8)	4	1.4	50	2-5	1	(5)
2-VT178	(8)	2	1.4	74	3-4	1	(4)
VT179	(5-8)	2	1.4	48	2-6	1	(6)
VT180	(1-8)	4	1.4	42	2-3	7	(3)
1-VT181	(8)	3	6.3	58	3	1	
2-VT181	(8)	3	6.3	58	6	1	
1-VT182	(1-8)	2	1.4	40	2-3	4	(3)
2-VT182	(1-8)	2	1.4	40	6-7	4	(6)

TUBE		A	B	C	U	D	
VT183	(8)	2	1.4	86	4	1	
VT184	(3-7)	4	Off	40	5	Gas Test	
VT185	(1-8)	4	1.4	40	2-3	1	(3)
1-VT188	(4-7-8)	2	6.3	50	2-3	1	(3)
2-VT188	(4-7-8)	1	6.3	100	5	1	
3-VT188	(4-7-8)	1	6.3	100	6	1	
1-VT189	(7-8)	2	6.3	48	3-4	1	(4)
2-VT189	(2-8)	2	6.3	48	5-6	1	(5)
VT190	(8)	4	6.3	58	2-3	1	(3)
VT192	(8)	2	6.3	44	2-6	1	(6)
VT193	(8)	4	6.3	78	2-3	1	(3)
1-VT194	(8)	2	6.3	52	3-4	1	(4)
2-VT194	(8)	4	6.3	64	2-5	1	(5)
3-VT194	(8)	2	6.3	42	5-6	1	(6)
1-VT195	(8)	4	6.3	28	3	6	
2-VT195	(8)	4	6.3	28	5	6	
1-VT197A	(8)	3	5	48	4	2	
2-VT197A	(8)	3	5	31	4-0	2	(4)
VT198A	(4)	4	6.3	50	3-4	2	(4)
VT199	(7)	4	6.3	56	6-8	2	(6)
VT200	(3-7)	4	6.3	40	5	Gas Test	
VT201	(7)	4	2.5	36	3-4	2	(4)
VT202	(2-4-7)	4	6.3	82	1-5	3	(6)
VT203	(2-4-7)	2	6.3	46	1-5	3	(1)
1-VT205	(8)	4	6.3	73	6	7	(2)
2-VT205	(8)	1	6.3	74	4	3-7	
3-VT205	(8)	1	6.3	74	5	3-7	
1-VT206A	(8)	3	5	30	4	2	
2-BT206A	(8)	3	5	30	6	2	
1-VT207	(4-8)	4	12.6	80	3	7	(1)
2-VT207	(2-8)	4	12.6	80	6	7	(5)
1-VT208	(8)	4	6.3	46	2-5	1	(5)
2-VT208	(8)	2	6.3	44	3-4	1	(4)
VT209	(3-5-7)	4	12.6	54	6-8	2	(6)
VT210	(1-5)	1	1.4	70	2-4-6	7	(4)
VT211	(3-5-7)	4	6.3	58	6-8	2	(6)
VT213A	(7)	4	6.3	78	3	2	(5)
1-VT214	(7-8)	3	12.6	86	3	2	
2-VT214	(4-7)	3	12.6	86	5	2	
1-VT215	(6)	4	6.3	30	2-4	1 Eye Closed	
2-VT215	(6)	4	6.3	30	4	1 Eye Open	
VT216	(4)	4	2.5	26	0	1	
VT217	(4)	4	6.3	28	3-0	3	
VT218	(4)	4	6.3	26	0	1	
		Tie Side Pin and Top Cap Together					
VT221	(2-7)	4	1.4	44	3-4	8	(4)
VT222	(7)	3	6.3	42	3	2	(5)
1-VT224	(7)	4	6.3	64	0	1 Right Top Cap	
2-VT224	(7)	4	6.3	64	0	1 Left Top Cap	

TUBE		A	B	C	U	D	
VT225	(5)	4	5	70	4-0	1	
1-VT229	(6-8)	2	6.3	48	1-2	7	
2-VT229	(3-8)	2	6.3	48	4-5	7	
VT230	(7)	4	6.3	32	3-4	2	
1-VT231	(6-8)	4	6.3	72	2	7	
2-VT231	(3-8)	4	6.3	72	5	7	
VT232	(7)	4	6.3	26	0	2	
1-VT233	(8)	4	6.3	26	2-6	7	
2-VT233	(8)	1	6.3	80	4	3-7	
3-VT233	(8)	1	6.3	80	5	3-7	
VT235	(7)	2	6.3	48	0	2	
		Tie Both Top Caps Together					
VT236	(4)	3	3	32	0	1	
VT239	(8)	2	1.4	46	2-6	1	(6
VT241	(1-4-5-6-8)	4	6.3	94	3-7	2	
VT243	(8)	3	6.3	72	4	1	
1-VT244	(8)	3	5	36	4	2	
2-VT244	(8)	3	5	36	6	2	
VT245	(7)	4	6.3	26	3	2	
VT247	(7)	4	6.3	40	6-8	2	(6)
VT260	(3-7)	4	0.63	50	5	Gas Test	
VT264	(1-7)	4	1.4	40	2-4-6	5	(4)
VT266	(4)	4	3	28	0	1	
1-VT268	(8)	2	12.6	68	2-3	7	(3)
2-VT268	(8)	2	12.6	68	4-5	7	(4)
VT269	(3-5-7)	2	6.3	42	4-8	2	(4)
1-VT287	(1-3-6-8)	4	6.3	32	4-0	5 Right Top Cap	(4)
2-VT287	(1-3-6-8)	4	6.3	32	4-0	5 Left Top Cap	(4)
VT288	(3-5-7)	4	12.6	70	6-8	2	(6)
1-VT289	(6-8)	2	12.6	70	1-2	7	(1)
2-VT289	(3-8)	2	12.6	70	4-5	7	(4)
W17	(1-5)	4	1.4	76	2-3	7	(3)
W719	(1-3-5)	4	6.3	46	7-8	4	(8)
W727	(4)	4	6.3	50	5-6	3	(6)
1-X14	(7)	4	1.4	50	3-4-0	2	(4)
2-X14	(7)	4	1.4	54	4-0	2	
1-X17	(1-5)	4	1.4	50	2-3	7	(3)
2-X17	(1-5)	4	1.4	50	3	7	
X99	(4)	2	3.0	60	2-3	1	(3)
1-X719	(5)	4	6.3	66	1-6	4	(1)
2-X719	(5)	2	6.3	44	8-9	4	(9)
1-X727	(4)	4	6.3	48	6	3	
2-X727	(4)	4	6.3	46	5-6	3	(6)
XC95	(1-4-7)	4	2	90	5	3	(2)
XC97	(1-4-7)	2	2	32	2-5	3	(2)
XC900	(2-4-7)	1	2.5	54	5	3	(1)
1-XCC189	(5-8)	4	4.2	36	1	4	(2)
2-XCC189	(3-5)	4	4.2	36	6	4	(7)
1-XCF80	(5-7)	4	4.2	46	1	4	
2-XCF80	(5-8)	4	4.2	66	3-6	4	(3)

TUBE		A	B	C	U	D	
1-XCL85	(5-8)	4	7.5	90	1	4	(2)
2-XCL85	(3-5)	2	7.5	100	6-7	4	(9)
XF183	(1-3-5)	4	3	36	7-8	4	(8)
XF184	(1-3-5)	4	3	44	7-8	4	(2)
XL84	(1-2-5)	4	7.5	36	7-9	4	(9)
XL500	(1-2-3-5-8)	4	12.6	28	6-7-0	4	
1-XXB	(1-8)	1	1.4	40	3-4	7	(4)
2-XXB	(1-8)	1	1.4	40	5-6	7	(5)
2-XXD	(7-8)	4	12.6	76	3	1	(4)
2-XXD	(2-8)	4	12.6	76	6	1	(5)
1-XXFM	(7-8)	2	6.3	56	2-3	1	(3)
2-XXFM	(7-8)	1	6.3	100	5	1	
3-XXFM	(4-8)	1	6.3	100	6	1	
XXL	(8)	4	6.3	66	2	1	(6)
XY88	(1-2-5)	3	19.6	40	3-6-7-8-9	4	
YC95	(1-4-7)	4	3	72	5	3	(2)
YF183	(1-3-5)	4	4.2	40	7-8	4	(8)
YF184	(1-3-5)	4	4.2	43	7-8	4	(2)
Z14	(7)	1	1.4	42	3-0	2	
Z63	(7)	2	6.3	54	3-0	2	
Z729	(2-5-7)	4	6.3	26	6-9	4	(9)
Z900T	(3-7)	4	.63	47	1-4	—	—
1-ZD17	(7)	4	1.4	30	5-6	1	(6)
2-ZD17	(7)	1	1.4	92	3	1	